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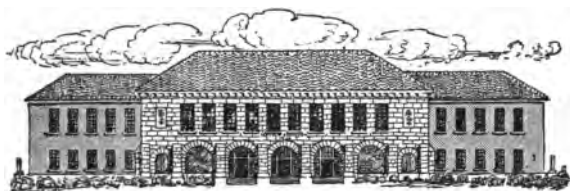
THE GEOGRAPHICAL SERIES

and the World

BOOK FOUR



EDITED
BY
CLARENCE F. CARROLL



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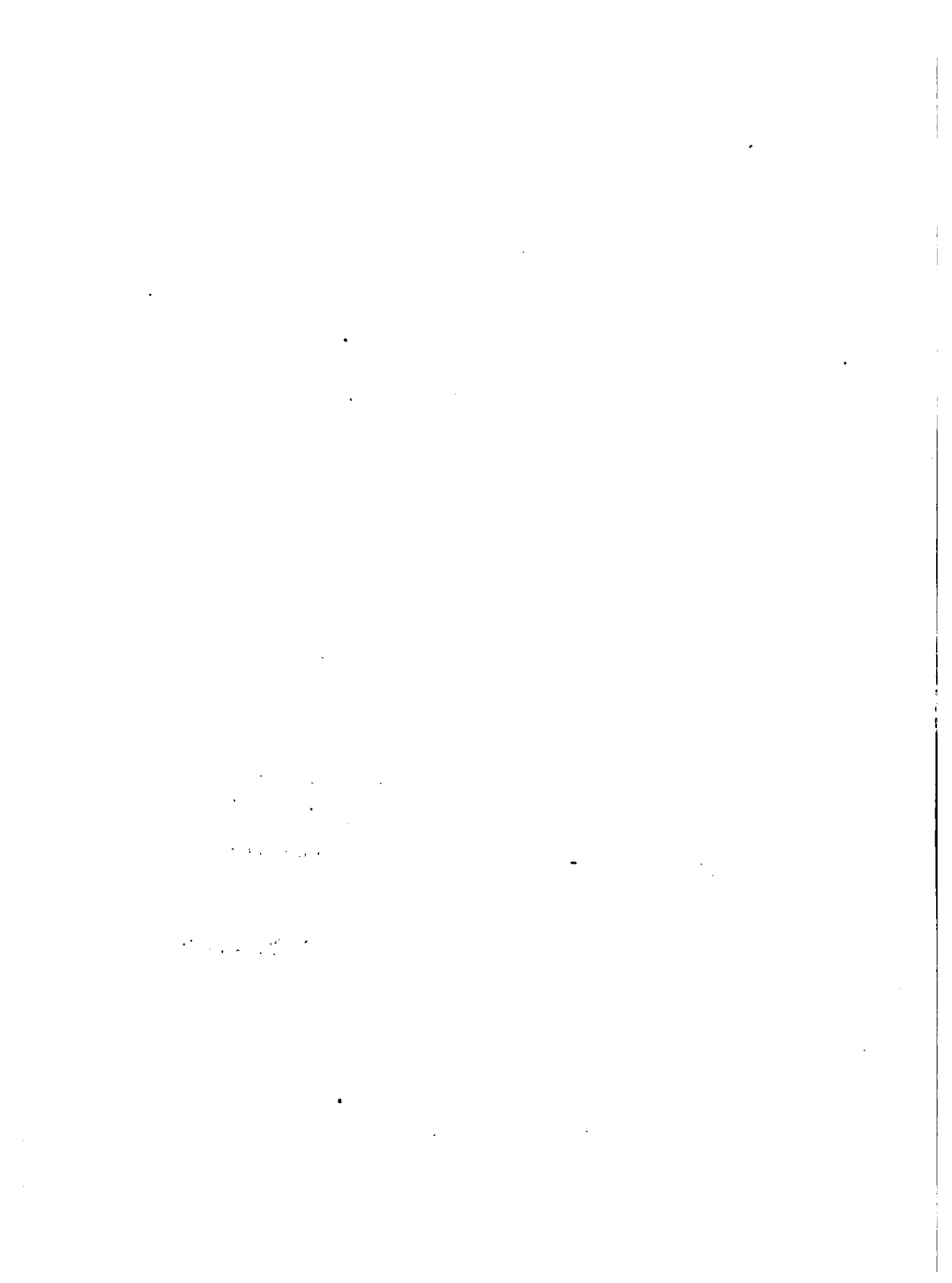
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NEW CENTURY GEOGRAPHICAL SERIES

AROUND THE WORLD

Book Four

FOR FOURTH AND FIFTH GRADES

BY

STELLA W. CARROLL TOLMAN

AND

ESTELLE M. HART

EDITED BY

CLARENCE F. CARROLL

Superintendent of Schools, Rochester, N. Y.



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AROUND THE WORLD

BOOK ONE, for first and second grades
(formerly called First Book).

BOOK TWO, for second and third grades
(in press).

BOOK THREE, for third and fourth grades
(formerly called Second Book).

BOOK FOUR, for fourth and fifth grades
(formerly called Third Book).

BOOK FIVE, for fifth and sixth grades
(in press).

BOOK SIX, for sixth and seventh grades
(in press).

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PREFACE

BOOK FOUR presents characteristic features of our own country, which comprises an area so vast as still to make our title, AROUND THE WORLD, a fitting one.

This volume is intended for pupils of the fourth year in school, though it may be read with profit by an advanced third grade or in review by the fifth grade. We have kept in mind the fact that pupils in the fourth grade are scarcely ten years old, and are still children. Text-books written for this grade are usually a year ahead of the pupil. This is especially true of readers.

A glance at BOOK FOUR will show that it is the most profusely illustrated reading book of this grade ever published. The pictures are strictly up to date, are educational, and to a good degree represent faithfully the life, industries and varied natural features of our country.

We have distinctly avoided an attempt to treat exhaustively any topic. It has been our purpose here, as in preceding volumes, to arouse interest through the illustrations and to suggest very much more than is told. Some questions are asked in the text that will lead pupils and teachers to draw upon outside sources of information.

The publishers and authors are under great obligation to the publishers of several leading magazines for permission to reproduce illustrations, especially to the publishers of "Munsey's Magazine," "McClure's Magazine," "The Cosmopolitan," "The New England Magazine," and "The Outlook"; also to the Northern Steamship Co., and to Swift & Co.

THE AUTHORS

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AROUND THE WORLD.

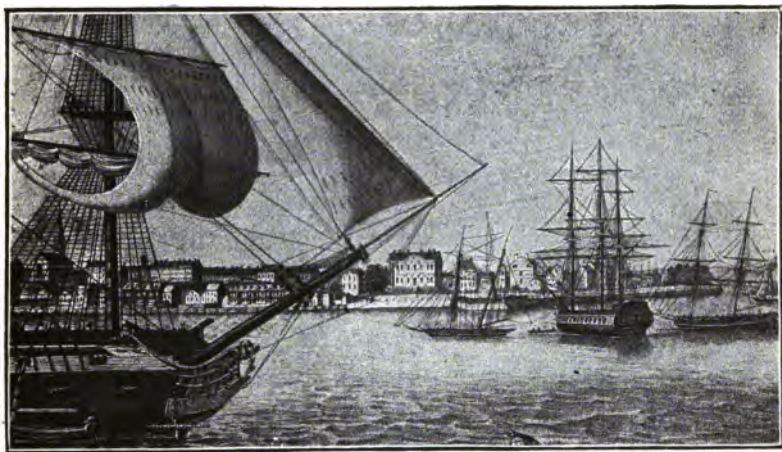


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AROUND THE WORLD.

BOOK FOUR.

NEW YORK.



NEW YORK ABOUT 1790.

Not far from three hundred years ago some Dutchmen from Holland came to America and bought an island of the Indians.

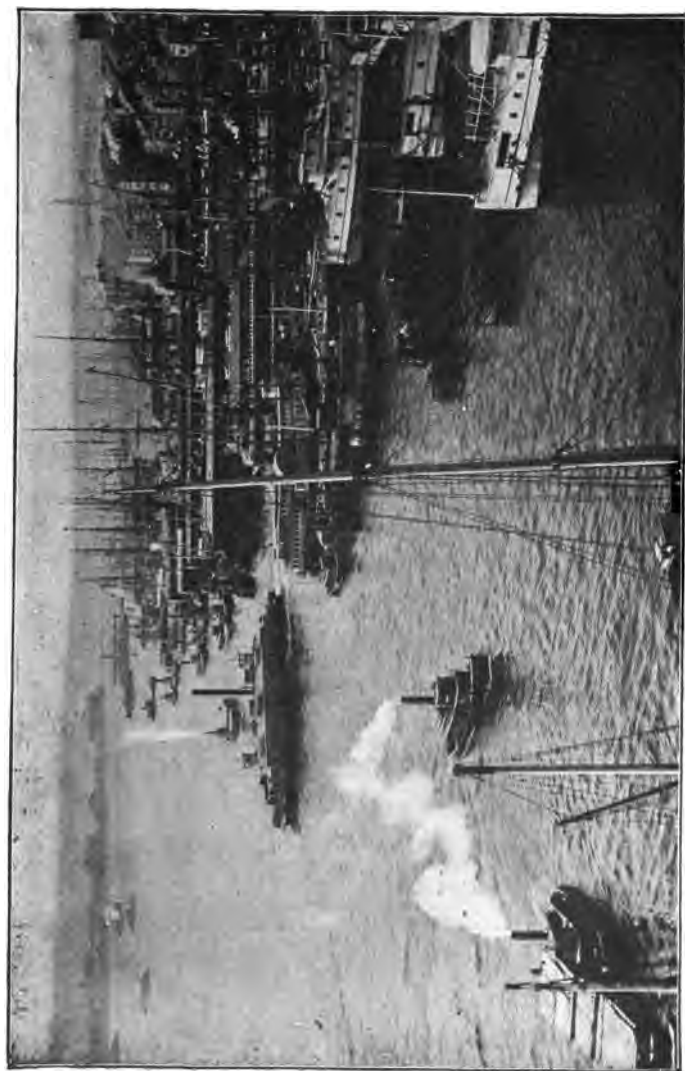
This island, called Manhattan, was about fourteen miles long and two or three miles wide.

The Indians sold the island for twenty-four dollars' worth of beads, buttons and other trinkets.

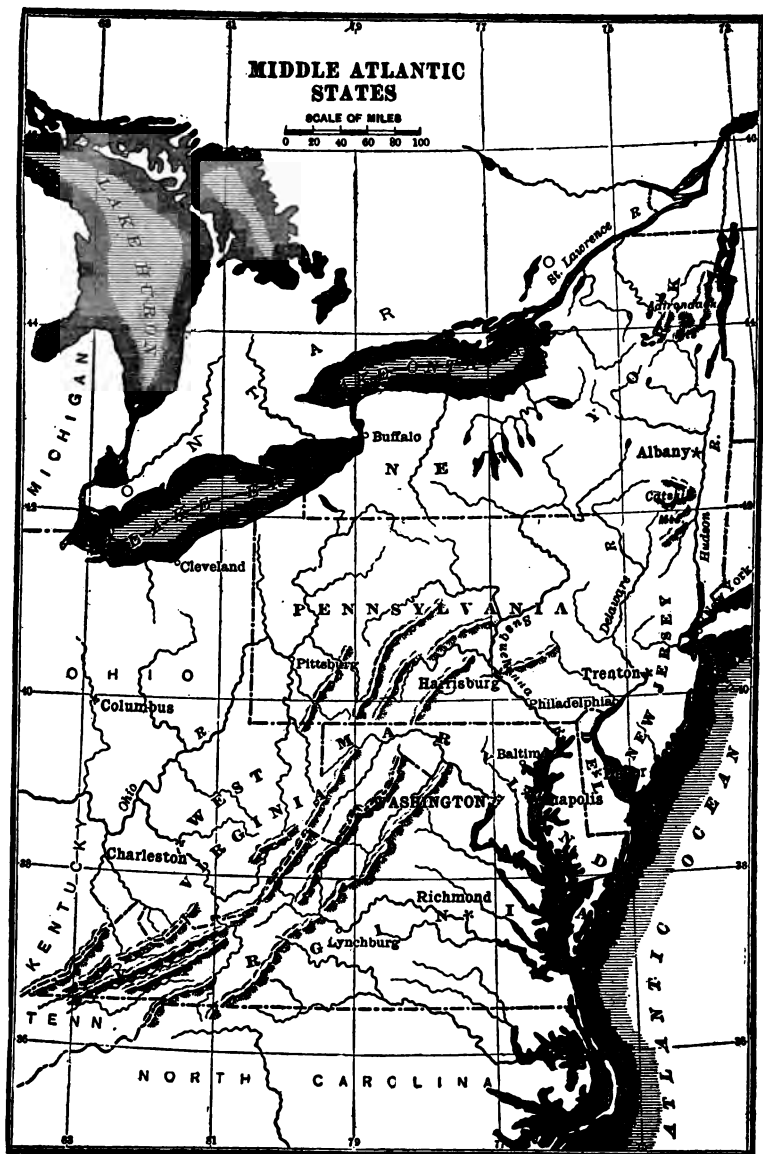
It is probably true that all of the gold mines in the world could not produce enough in a year to pay for that island now.

What has made such a change in its value?

Why was the island situated in a good place for a large city?



EAST RIVER DOCKS.





BROOKLYN BRIDGE.

Perhaps you have heard the story of the building of the Brooklyn Bridge.

It is a great bridge of stone and steel, over a mile in length, and is one of the most wonderful bridges in the world.

It was designed by a man named John Roebling, who died before it was begun.

His son took up the work, but he worked so hard in superintending the building of the bridge that he became an invalid and was unable to leave his house.

He had been working three years on the bridge when he was taken ill, and it was not a quarter done.



COMPARATIVE LENGTH KAISER WILHELM DER GROSSE.

"The North German Lloyd twin-screw steamship Kaiser Wilhelm der Grosse, if set on her stern at the side of the twenty-seven-story St. Paul building, on Broadway, New York, would be more than twice as high. She would be one hundred feet taller than the Washington Monument, while the dome of the national Capitol, or Trinity Church tower, at the head of Wall Street, would barely reach to her first smoke-stack."

He was bound not to give up. He moved to a house not far from the bridge, with windows looking out upon it.

There for ten years more he superintended the work of the men, until the bridge was completed. He watched the workmen through a telescope and sent his orders to them by messengers.

How does the new East River Bridge compare in size with the Brooklyn Bridge?

The East River is not really a river at all, but a strait connecting Long Island Sound with the ocean.

On the western side of Manhattan there is a real river, flowing down to the sea, and one of the most beautiful rivers in our country.

Across this river from New York lies Jersey City, where trains from all over the country come in to bring their produce to New York harbor.

New York has more than twenty-five miles of water-front on the island of Manhattan alone.

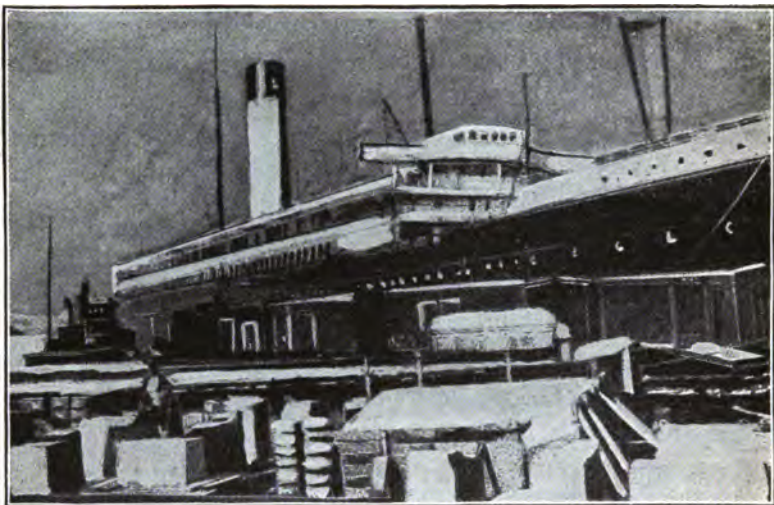
It is said that more than half of all the produce bought of foreign nations by the people of the United States comes in ships to the New York wharves.

What sort of things do we buy from the people of other nations?

Do we buy, for the most part, manufactured articles, or material to use in manufactures?

What are the ships laden with that leave New York for foreign ports?

Most of our trade is with Europe. The fastest steamers in the world are those which go between Europe and America.



"OCEAN GREYHOUND."

How long does it take a fast steamer to go from New York to Liverpool?

Why are these fast boats called "ocean greyhounds?"

It is very interesting to visit one of the ocean steamers as she lies at the wharf.

No wonder they are called "floating palaces." There are halls, parlors, libraries, dining rooms, sleeping rooms and bath rooms, all beautifully furnished and decorated.

Down in the lower part of the ship is a place for the poor people who cannot afford to spend much money for their journey.

This place is called the steerage.

It seems as if there ought to be room enough for many people in one of these immense ships.

It is hard to realize the length of one of them unless we compare it with something else which is very large or high.

How strongly such a ship must be built! What material is used in its building?

How many tons of coal are needed to heat your school-house for a whole year?

Can you find out how many tons are used in the furnaces of one of these great steamships on one voyage?



CRUISER NEW YORK AND STEAMER NEW YORK.

Here are two boats with the same name, but how differently they are built!

What sort of work does the cruiser New York have to do?

The passenger steamer New York is one of the beautiful

Hudson River steamers that runs between New York and Albany.

It leaves the New York pier on the Hudson River, or the North River, as it is sometimes called, about nine o'clock in the morning.

It takes until six o'clock in the afternoon to reach Albany, but the sail up the river is so beautiful, and there are so many interesting places to see, that one wishes the trip was longer.

It is interesting to watch the shipping as we first leave the pier and start on our journey up the river, and the roofs and spires of the city as we pass along:



GRANT'S TOMB.

General Grant's tomb, rising from the trees on the banks above the city, is one of the things that we shall be sure to notice.

We have a fine picture of the steamer passing this place.

Which way is the steamer going, toward New York or Albany?

How can you tell?

It will not be long before we begin to see the Palisades on the western side of the river.

What is the meaning of the word Palisade?

Are these Palisades in the State of New York?

What a wonderful wall of rock they form! They are from two hundred and fifty to six hundred feet high, and extend about fifteen miles along the river.



PALISADES.

Another smaller river flows on the other side of the Palisades, not far away, side by side with the Hudson, but separated from it by this massive wall.

Has there been any danger that the beauty of the Palisades might be destroyed?

How have the people tried to prevent it?

Did you ever hear of Washington Irving?

What a charming story-teller he was!

You would like to read his Legend of Sleepy Hollow. Then you would be interested in his description of the Van Tassel Cottage.



SLEEPY HOLLOW CEMETERY.

Washington Irving's grave is in the quiet little cemetery at Sleepy Hollow.

A little above Irvington, a town on the eastern bank of the river, you may catch a glimpse, through the trees, of the gables of a pleasant, rambling old house.

This house is Sunnyside, Washington Irving's home.

The writer himself said of his quaint old house that it was "made up of gable-ends, and as full of angles and corners as an old cocked hat."

He had no boys and girls of his own, but he was fond of young visitors, and Sunnyside was a favorite place for his



SUNNYSIDE.

boy and girl friends to visit, and royal good times they had in the old house.

After we have gone considerably farther up the river, through the Highlands and past West Point, we shall begin to catch glimpses of the Catskill Mountains, off to the west.

Washington Irving wrote the story that, more than any other, reminds us of the Catskill Mountains—the story of Rip Van Winkle.

Is there a boy or girl who reads this book who doesn't know that story?

This is the way, in the beginning of his story of Rip Van Winkle, that Irving describes these mountains:

“They are seen away to the west of the river, swelling up to a noble height, and lording it over the surrounding country. . . . When the weather is fair and settled, they are clothed in blue and purple, and point their bold outlines on the evening sky; but, sometimes, when the rest of the landscape is cloudless, they will gather a hood of gray vapors about their summits, which, in the last rays of the setting sun, will glow and light up like a crown of glory.”

There is no more interesting place to visit upon the Hudson River than the Military Academy at West Point.

The view of the river to the north toward Old Cro' Nest and Storm King is perhaps the finest on the whole beautiful Hudson.

It was General Washington who first called attention to the wonderful beauty of this spot and suggested that a great military school be built there.



BATTLE MONUMENT, WEST POINT.

The Parade Ground is on a plateau about two hundred feet above the river, and seems almost as level as a floor.

To see the cadets on parade is the most interesting sight at West Point.

We should like to see the barracks, also, and to examine the fine collection of old cannon and shells near the flag staff.

In the Revolutionary War, Benedict Arnold was in command at West Point.



MIRROR LAKE AND LAKE PLACID.

Why is the name of Benedict Arnold held in dishonor in our history?

The names of Lake Placid and Mirror Lake tell us something about them.

One would expect from such names very clear, calm lakes.

So they are, usually, reflecting, with wonderful distinctness, the mountains rising from the shores and the clouds in the blue sky overhead.

These mountain lakes are rather treacherous, though.

I have seen Lake Placid so clear and still on a summer morning that there was hardly a ripple on its surface, when suddenly a light wind would come up, and, within half an hour, white caps would be gleaming on the crest of every wave, and the tiny boats caught out would be rocking about wildly.

These lakes are right in the heart of the Adirondack Mountains.

It is because of these sudden squalls, which are apt to arise, that the Adirondack boats are built as they are.

They are very slender, round-bottomed little boats, but they ride the waves, rolling from side to side as an egg-shell might.

Many people go into the Adirondack forests to camp every summer.

Most of the camps are reached only by the lakes and streams.

There are no roads through these deep, tangled forests, and one can safely find his way about only in the narrow paths that the hunters have cut through the woods.

Do you know how they "blaze" the trees to show the way?



HUNTING CAMP.



LUMBER CAMP.

Many men spend their winters in the Adirondack forests. These are the lumbermen.

The lumber camp is generally situated from twenty to forty miles back from the railroad station in the forest.

The men drive to camp from the trains, seated on a load of barrels and provisions, stoves and hardware.

It is a rough, hard life, but the lumbermen are strong and do not mind the hardships.

As long as the roads are passable, provisions are brought them once or twice a week from the nearest towns.

They all come back to the log shanties at night, but the cutting ground is sometimes two or three miles from the camp.

As soon as the tree is cut, it is divided into lengths of thirteen feet and drawn to the "skid" or pile of logs, where it is to remain until spring.



HAULING LOGS.

Two men take a log to the skid. One drives a horse which drags the log by a chain, and the other clears a path with an axe.

When the ice in the nearest river is solid, the logs are piled upon the sleds.

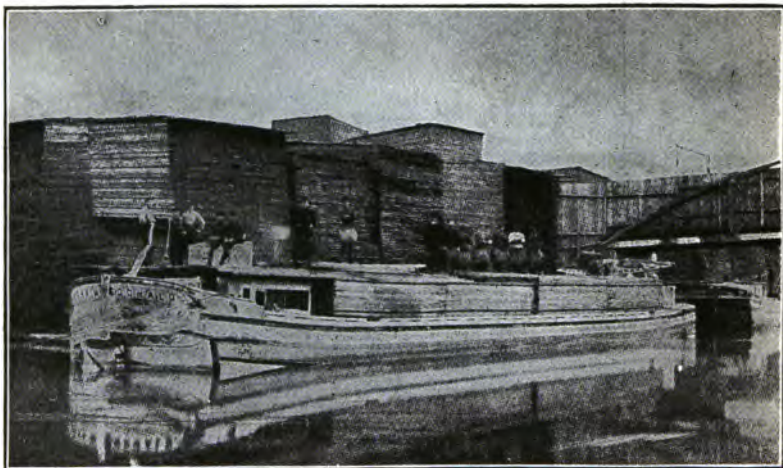
Each layer is bound in place by chains.

At the river the logs are placed upon the ice, to float down to the mills with the freshet in the spring.

What kinds of trees are cut for lumber in the Adirondack forests?

The logs are sawn into boards at the mill. Some of these are sent across the State of New York on canal boats.

The Erie Canal extends from Buffalo to Albany, a distance of over three hundred and fifty miles.



LUMBER TRANSPORTATION—ERIE CANAL.

It connects Lake Erie with the Hudson River.

Before this canal was built, it cost much more to send freight across New York State than it does now.

Most of our wheat is raised in the West.

When it was sent by the railroads, it was regarded as quite a luxury, and wheat bread was by no means so commonly used in New England as it is now.

For many years, horses, walking in a narrow path beside the canal, dragged the boats slowly along by means of ropes.

They may sometimes be seen to-day, but most of the boats are now propelled by steam.



NIAGARA FALLS—MAID OF THE MIST.

NIAGARA.

Where does all the water come from that forms Niagara Falls?

Where does it go?

Until it comes to within a mile of the falls, the Niagara River is a broad, quiet stream, but there it becomes narrow, the rapids begin, and the water boils and dances as it sweeps along past the rocks and islands.

Some one has said that it seems to be rousing itself, getting ready for its great jump.

The waters dash against Goat Island, which lies on the edge of the falls, and then comes the tremendous leap of one hundred and sixty feet over the precipice.

How wonderful it is!

There is a great roar as the river pours over the rocks.

The water is a clear, sparkling green; a cloud of dazzling white mist floats up from below, and when the sun shines upon it, rainbows can be seen shimmering in the spray.

The stanch little steamer the Maid of the Mist will take one up very close to the falls in the tossing river.

A guide will provide you with a rubber suit and felt slippers and conduct you down a wooden staircase among the rocks, to the Cave of the Winds, right under the falls.

The noise of the water is almost deafening there. One may stand and look out through the mist and the rainbows.

It seems as if one were in a wonderful new world.

Across the river, if we visit the falls on the American side, lies Canada.

A great steel suspension bridge connects the two countries here.

What do we mean by a suspension bridge?

The first one across the Niagara River was built many years ago.

The engineer who built the bridge wanted to send a line across the river from one high bank to the other.

He promised to give five dollars to the first person who would do this.

That interested the boys, and the next day when there was a good breeze, a crowd of boys with their kites and long strings gathered on the bank on the American side.

Before night one boy did succeed in landing his kite on the other bank.

A cord was fastened to the string and drawn across. Then a rope was drawn over by means of the cord, and a cable of strong wires was attached to the rope.

When the cable had been fastened securely to each bank, an iron basket was hung on it. In this the workmen and their tools were drawn across the river.

Stone towers were made, heavy cables were carried over, and so the work was fairly begun.

There is another bridge across the Niagara River in winter. This bridge is not made of steel, but of ice.

Weeks of cold weather cause much ice to form in Lake Erie.

Then comes a thaw. The ice breaks up, floats down the river and goes crashing over the falls.

Below the falls these great cakes of ice collect near the shore. This makes a narrow channel for the ice which still keeps coming down the river.

The channel grows narrower and narrower, and the ice piles higher and higher, until finally the space is all closed.

Then when more ice comes over the falls, it simply piles upon the bridge already formed, until it becomes thick enough to last for weeks.



'ICE BRIDGE, NIAGARA.

At this season thousands of visitors go to the falls to see the wonderful sights.

They pass and repass all day upon the ice bridge.

Little shanties are built upon the bridge, where the travelers may stop and get a cup of hot coffee and a light luncheon.

It is thought that the ice bridge must often be over seventy feet thick.

How high is the house that you live in?

One winter the ice in the Niagara River crowded up against the abutments of the great steel arch bridge, and it had to be blasted away like rocks.

A wonderful tunnel has been built at Niagara Falls.

This tunnel is deep underground and is about a mile long.

It is like a great pipe and extends from a point a mile above the falls to a little distance below them.

Through this, part of the water of the Niagara River is turned.

In the tunnel pits have been sunk four great turbine wheels, which are turned round and round as the water rushes upon them.

Attached to the wheels is machinery to make electricity. This is used to run many factories near the falls.

The power of these wheels is so great that it is said that each one exerts as much force as five thousand horses could, all working together.

Some of the electricity goes by wires to furnish power to run electric cars and factories in the city of Buffalo.



WHEEL PITS, NIAGARA.

MAINE WOODS.



HUNTING CAMP.

How many miles are covered by the largest forest which you know? Think of a stretch of woods covering as much land as the states of Vermont and Massachusetts and Rhode Island together! That is about the extent of the Maine woods.

One can take the train at Boston and in nine hours find himself within this great forest wilderness.

Hundreds of people from the cities go there every year to rest and grow strong in the pure, pine-scented air, and to enjoy the fine hunting and fishing.

The streams and lakes, hidden in the woods, are the homes of bass, pickerel and speckled trout.

In the depths of the forest live the wild deer and the giant moose.

There is a chain of lakes and rivers through these woods one hundred miles long, with only two short "carries."

Do you know what that means?

A "carry" is a place between the lakes where there is no connection by water and where your guide will carry your canoe for you.

No one would think of going far into the woods without a guide.

They are usually old Penobscot Indians or Canadians from over the border.

How wise they are, in all the ways of the wild creatures of the woods; what comfortable beds they can make of piled up hemlock boughs, and what fine suppers they can cook over the open fire!



HUNTING IN MAINE.



INTERIOR OF HUNTING LODGE.

How picturesque the camps look, nestled on the shore of the lake!

There is usually one large room downstairs in the hunter's cabin, which serves as the general living room, and a "loft" above, reached by a ladder, and furnished with half a dozen comfortable bunks.

The main room is often decorated with trophies of the hunt, a deer's head, a fox skin, a stuffed squirrel or bird, and perhaps a bear skin rug.

The guns and fishing rods are important parts of the furnishings.

When preparing to leave camp for the hunt, the guns are well cleaned and oiled and the canoes are patched, if necessary.

Some of the canoes are built by the Indians still, but a great many fine ones are made in Bangor.



GUIDE.

These Bangor canoes are quite famous, being very light, buoyant and tight, and finished with a sort of enamel that makes them proof against the snags which they must encounter.

The moose is sometimes tracked through the depths of the forest, but is probably most often shot at from the water as he comes down to the shore.

His favorite food is the root of the yellow water-lily, so it is in the neighborhood of the lily beds that one will be apt to find him.

The guides and the hunters are up by daylight, when starting on the hunt, skimming over the water, and running in and out of the little bays along the shore.

"Um big moose better look sharp now," one of the old guides used to say, "he can't run so fast like bullets."

And the big moose does look sharp. Often, as the hunter's canoe moves silently along the lake, the crash of underbrush near the shore shows that the eyes of the moose

were keener than his, and that the game has escaped for that time.

Sometimes there will be several days of paddling through the lakes and streams before the hunter has the chance to fire a shot.

If the moose is finally hit, he will turn quickly back from the shore and try to hide himself in the woods. Then the hunter makes haste to track him and send another shot, which he hopes will lay the great forest monarch at his feet.

The moose's horns are not as ornamental as deer antlers, but still you may be sure that the hunter is proud to carry them home.

Is anything more graceful than the wild deer, or anything prettier than the little fawn with its soft, spotted coat?



MOOSE.

How he enjoys his free life in his forest home !

When he is a few months old, his mother teaches him what herbs and leaves are the most delicious, and where the beech nuts grow. He learns how to scrape away the light early snows that cover the nuts, on the ground, but when the deep snows come he lives on the twigs of balsam, hemlock and spruce. He likes dainty bits of moss and lichen, too.

How still it is in the woods at night, when the hunters who are away from camp come ashore for a night's rest !

The calls of the blue-jays stop at sunset, and there is no sound but the occasional hoot of an owl and the crackling of the camp-fire.



CAMP AT NIGHT.



MOOSEHEAD LAKE.

After a delicious supper of fish, served on plates made of clean strips of birch bark, the guide spreads a bed of hemlock boughs two feet deep, and over these are thrown the blankets, and the hunters say that is a bed fit for a king.

Perhaps quite as many fishermen as hunters visit the Maine woods.

It is said that in no other region in the world are found such large, spotted trout as are caught in the Rangeley Lakes.

Moosehead Lake is farther north. It is a beautiful lake over thirty miles long, with three hundred miles of shore.

How are trout usually caught?

Perhaps you can get some fisherman to show you his fly-book.

It takes much skill to

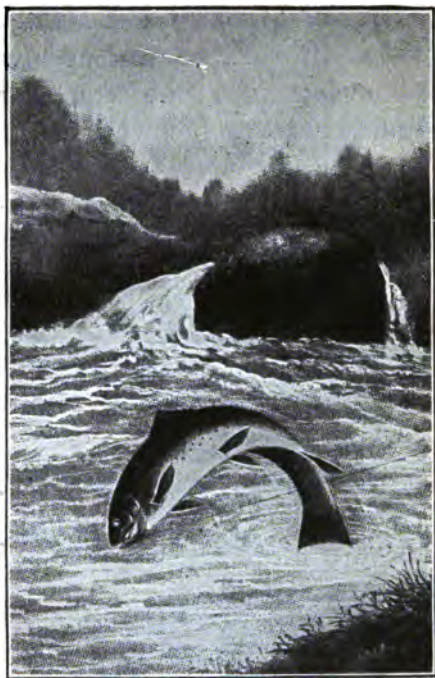
cast the fly so lightly on the water that it will appear to the wary trout, down in the clear water, to have the motion of the real fly.

Did you ever hear of taking a kettle of fire out on the lake in a boat?

Early in the season, the black-flies and midges and mosquitoes would make fishing anything but pleasant in many places, if it were not for the "smudge" fire which the guide knows how to make, and which drives away these little pests.

A bright little fire is started in the bottom of an old iron kettle and this is covered with a certain kind of moss, or the bark of dead evergreen trees. This is rather damp and will not burn freely, but makes a fine smoke which the insects do not like.

Perhaps the fisherman does not enjoy it either, but he would rather submit to that than to the stings of the flies and mosquitoes.



TROUT FISHING.

The smudge fire is not at all like the merry fire that the guide will make on the shore when the speckled beauties, now swimming in the lake, are safely landed and ready for the fisherman's supper table.



CARRY"—BETWEEN LAKES.

The hunter may sometimes entice a moose from the forest to the water's edge by imitating the call of another moose.

He will have to listen carefully to a call himself and practice some time before he can deceive another moose, however.

When he does call he uses a sort of horn, quite large and long, which he makes of birch bark.

It is against the law now-a-days in the State of Maine to try to deceive a moose in this way, but hunters still keep up the practice in parts of Canada.

Sometimes the moose may be heard crashing through the woods in answer to a call, and then, suddenly, all will be still. He has seen the hunter, without being seen himself. He realizes that he has been fooled, and steals off through the forest.

It is hard to believe that the great creature can move so silently through the thickets and crackling twigs, when he knows that the slightest sound would betray him to the watching hunters.

When the dogs are on their tracks, deer follow certain well-known paths leading to the nearest water. These paths, or runways, as they are called, are known to the guides, who can tell the hunters where to stand in order to shoot at the frightened deer as he rushes from the dogs.

After the deer is shot, he is usually dragged to camp over



HUNTING DEER.

the snow by a rope which is fastened to the horns, or sometimes to the lower jaw.



RETURNING TO CAMP.

At other times the hunter lashes two canoes together with rawhide, lays poles across the top for supporting the moose or deer, and proudly paddles back to camp.

INDIANS.

The Indians to-day are usually quiet and peaceable. They realize that the white men are too strong for them to fight. They are apparently willing to live on their reservations and take such help as the white men will give them.

They could not support themselves very well, if they would.

Their hunting grounds have been taken from them and they have not learned to be good farmers and mechanics.



INDIAN CHIEF.

Schools have been built for them, however, and it is hoped that the Indian boys and girls who are growing up will be useful men and women.

Some of the Indian tribes are much more civilized than others.

There are about sixty different Indian languages used among them; and they cannot understand each other any



INDIAN CAMP.

more than a German boy can understand an English boy, unless one has learned the language of the other.

How fond the Indians are of bright colored blankets and gay dresses!

See the feathers in their hair, their fringes and embroideries and strings of beads.

Some of the women make beautiful blankets and mats and baskets to sell to the white people at the agencies.

The savage Indians still live in wigwams made of bark or brush and skins, and spend their days in hunting and fishing.



INDIAN BRUSH HUT.



MOKI INDIANS.

Should you enjoy having your hair brushed in this way?

These are Moki or Moqui Indians, of New Mexico and Arizona.

They live in the queerest little towns imaginable. The towns are called pueblos. The pueblos are built upon high plateaus. They were built in these places because they could not easily be reached by an enemy. The slopes of the hills are very

steep and can be climbed only by narrow paths.

There are no enemies to disturb the Moki Indians now, but they still live in their high, secluded towns.

They usually make their houses of stone, with flat roofs, and one house is built on top of another. They climb the hill, in such a way that the roof of one house forms the yard for the house above.

These houses are reached by ladders.

How would you like to have your next door neighbor use your roof for his play-ground?

The Moki Indians are very industrious and make unusually fine blankets and baskets. Many of them have orchards and gardens, where they raise peaches and melons and vegetables.

THE MIDDLE STATES.

Why is the old bell in Independence Hall in Philadelphia called the Liberty Bell?

What was the news that it proclaimed to the people when it was rung on the Fourth of July, 1776?

Philadelphia is one of the oldest cities in this country.

What people founded it? Who was their leader?

One of the largest buildings in the United States is the city hall in Philadelphia.

Upon the top of the tower is a statue of William Penn. It is so high above us as we look at it from the ground that we do not realize how large it is. It is one of the largest statues in the world. The buttons upon the coat are half a foot across.

One of the most interesting places to visit in Philadelphia is the mint, where gold, silver and copper money is made.

The pure gold, which may be seen in bricks in the vaults of the mint, is so soft that other metals have to be put with



LIBERTY BELL.

it before it is made into money. Otherwise it would quickly wear out with much handling.

What is the value of the largest gold coin that is made in this country?

Do we have silver coins of equal value?

Why is a silver dollar so much larger than a gold dollar?

If we were to go by train from Philadelphia to Washington, we should be interested to stop at Havre de Grace.



HAVRE DE GRACE.

General La Fayette named this town from a city in his own country.

It is beautifully situated where the Susquehanna River unites with Chesapeake Bay.

On the shore at the southern end of Havre de Grace stands an old government lighthouse.

About this place are the famous "Flats," which are the most celebrated grounds for duck shooting in the United States.

It is said that the canvas-backs and the red-heads feed here upon the wild celery, which gives their flesh a peculiar, dainty flavor.

In the season, rich men come here from all over the country to engage in duck shooting. Many of them come in their own yachts.

During the shooting season this part of the bay is a scene of much animation.



FISHING AT HAVRE DE GRACE.

Here, in the spring, in the broad Susquehanna, are caught great hauls of shad and herring.

These fisheries furnish some of the finest shad in the world.

Can you tell from the pictures how the shad are caught?

What is a seine?

Before the Civil War, negroes who were engaged in laying and drawing the long seines used to sing their weird songs while at their work.

Their singing sounded so sweet across the water that it was a custom for ladies and gentlemen to come a long way on horseback and gather in little groups on the shore to listen to the music.

Sometimes a luncheon of the delicious baked shad would be served them on the sands.

That fashion has passed long ago, however, and now most of the fishermen are foreigners, who do not entertain visitors by singing.

Two miles below Havre de Grace lies the long, narrow island of Spes Utie, where one of the United States fish hatcheries is established.

Millions of shad and of other fish are deposited in the bay or sent to various fishing grounds throughout the country each year.

WASHINGTON.



THE CAPITOL.

The Capitol at Washington is one of the largest and most beautiful capitol buildings in the world.

It looks like a great marble palace.

What is done in the Capitol?

What are the people called who make our laws?

How are the men chosen who are sent to Congress?

Washington is a city of wide, beautiful streets, with many trees and parks.

The Capitol Building is in the center, and from that the city is laid out in four great sections with the streets running

at right angles, making squares like those on a checker-board. Then there are avenues running out in all directions from the center, crossing the streets, and where the crossings come are little parks, with statues and fountains and flowers.



TREASURY DEPARTMENT.

Pennsylvania Avenue, a mile long, runs from the Treasury Building up to the Capitol.

The people in the Treasury Department have to take care of the money for our Government.

Money which is made in the mints is sent to the Treasury to be kept until it is needed.

Down in the vaults of the Treasury Building millions of dollars' worth of gold and silver are stored, and guarded by watchmen day and night.

The Treasury Department makes all of our paper money. The notes are sent out from the Treasury Building to all parts of the country.

Who is the present Secretary of the Treasury?

Near the Capitol is the Congressional Library. This is the finest building in America. It was made from granite that was brought from New Hampshire. In this library are many rare old books, magazines, and relics. Here is also preserved a copy of every book that is printed in this country. Do you know what is meant by a "copyright"? Why does a writer always wish a copyright from the Government when he writes a book?

Near the Treasury Building is the White House, the home of the President while he is in office.

The gates are kept open and we may go in at any time.

A beautiful lawn lies in front of the house, and the white walls shine through green forest trees.

The house is made of Virginia sandstone, which is soft and would not stand exposure to the weather without crumbling, were it not for the coat of paint which it receives very frequently. This keeps it looking as white as marble, and makes a beautiful picture in contrast with the neatly kept green lawns and great variety of shrubbery.

The broad, circular driveway seems to extend a cordial welcome.

When we visit the White House, we enter the great vestibule, with the wall at the back made of little pieces of colored glass all fitted together.

What a dazzling wall it is, as if it were made of jewels!

One feels as if he had stepped into a fairy palace.

Turning to the left there is the great East Room, with its silver chandeliers, its walls painted in silver and gold, its great mirrors and velvet carpets.

This is the public parlor of the White House.

Then there is the Green Room, furnished in green and silver, and the beautiful Blue Room, where the President and



WHITE HOUSE.

his wife stand to receive people who come to the evening receptions.

There is a Red Room, too, and a fine conservatory which we should like to see.



MOUNT VERNON.

George Washington did not live in the White House. We can visit his beautiful home at Mt. Vernon by taking a boat sixteen miles down the Potomac River, or we may reach it by trolley cars.

From every part of the city the Washington Monument may be seen.

It has been said that from a long distance it looks like a big piece of chalk, with a well sharpened point, but that from

close under it, it looks like a huge marble wall built right up into the sky.



WASHINGTON MONUMENT.

It is made of hundreds of blocks of marble, so closely fitted together that one can hardly see where they join.

There is an elevator in the monument, in which we may ride to the top, and as we rise slowly, higher and higher, we

can easily believe the man in charge who tells us that this is the highest stone structure in the world.

IRON.

One of the finest and largest steel factories in the world is at South Bethlehem in Pennsylvania.

A great deal of armor-plate is sent out from this factory.

What is armor-plate used for?

Why does an expert of the United States navy inspect the steel plate at every step of the work?

Why is it tested by heavy gun shots and discarded if it is injured by them?

It takes enormous machines to handle this heavy plate.

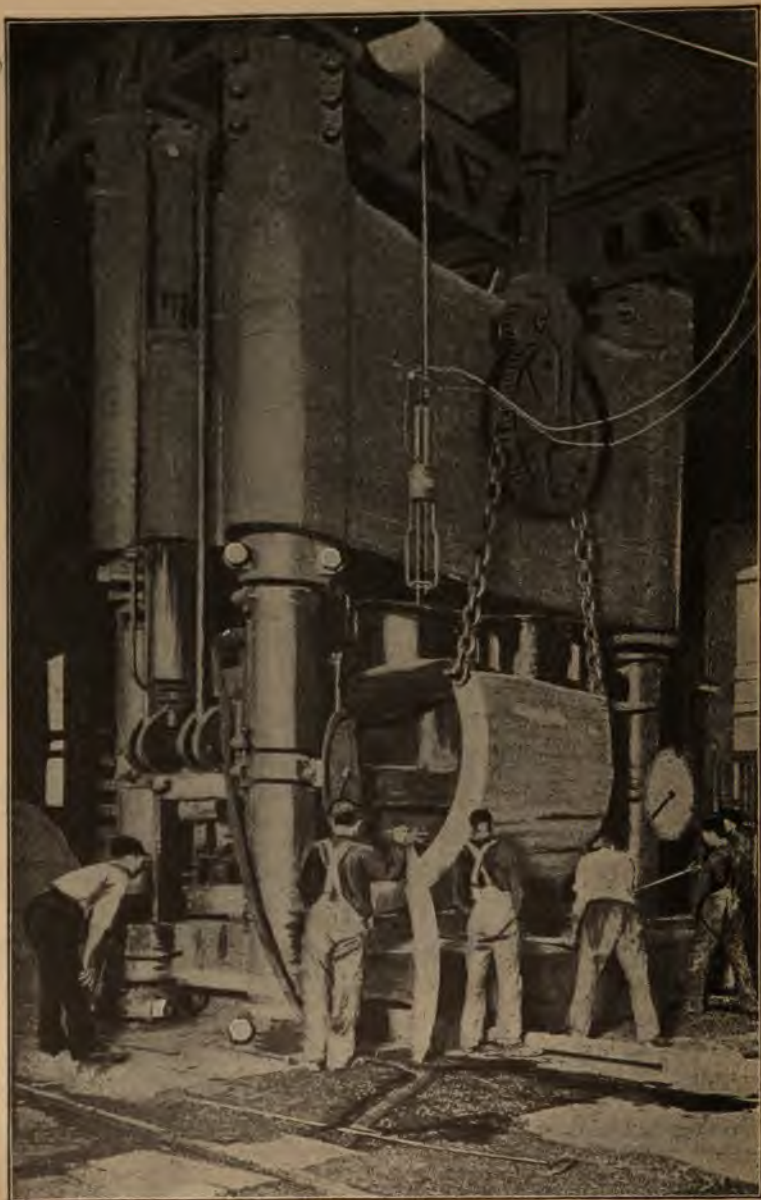
Some one has said that the great traveling cranes in this factory can pick up and carry and set down again a mass of steel weighing one hundred and thirty tons, as easily as an elephant picks up a peanut with his trunk.

The iron ore which is brought to the factory contains much matter besides the pure iron.

It is all heated in a very hot furnace and then the pure iron can be drawn off.

This iron is put with scrap steel and heated again to an enormous heat before it is ready to be poured into molds to make armor-plate.

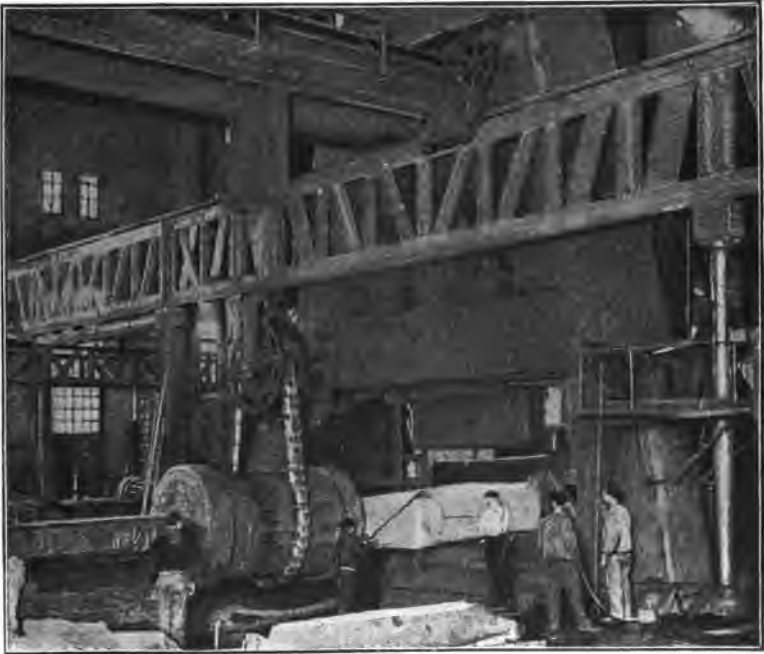
Ordinary coal would not be used for melting iron. It must be purified first, and this is done by roasting or baking it in ovens.



CURVING A FOURTEEN-INCH NICKEL-STEEL ARMOR PLATE.

These great ovens are made of brick and stone, with a door at the side, and a hole at the top for the smoke to pass through.

The ovens are filled with coal and then the doors are walled up with fire brick.

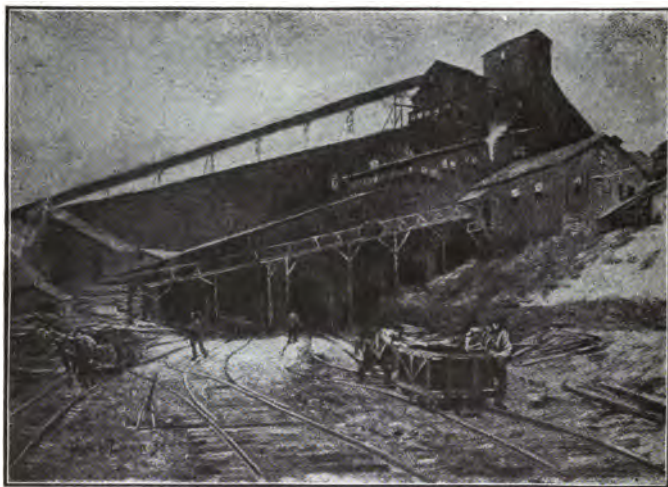


FROM ORE TO ARMOR PLATE.

The heat is very great, but the coal burns so slowly in these tight ovens that it does not turn to ashes, but the impurities are burned out of it.

It takes three days to change the coal into coke.

Cold water is poured in at the top of the ovens, and after the coke is cool enough, it is raked out and loaded on cars to be taken to the smelting furnaces where the iron is melted.



THE BREAKERS.

COAL.

If you were to visit the region of a coal mine, one of the first things which you would notice would probably be the "breaker."

This is a great, oddly-shaped building, grimy with coal dust, as indeed everything is in the vicinity.

You would see car after car dragged up an inclined road to the top of the breaker.

The cars come from a shed under which is the opening of the mine.

At the top of the breaker, workmen dump the coal into chutes.

The great lumps slide slowly on their journey through the building.

Huge teeth on revolving cylinders catch the lumps and crush them.

At different places there are grates which cause each size to go into its proper chute.

What a strange, monotonous roar is heard from this great breaker at its work!

There is a shed over the shaft of the mine, and a gigantic fan wheel that provides cool air for the miners.

If you look down into the mouth of the shaft you will see walls of granite blocks, moss-grown and dripping with water, and a little distance below, a well of blackness.

Out of this blackness comes the elevator.

Will you go down in it?

How swiftly it drops straight down into the earth!



COAL SHAFT.

When it stops we step out into the darkness, that is like a dense, black fog, which is very dimly penetrated by the little lamps which we are given to carry.

The guide goes ahead of us, and we wander on through tunnels that form a network of passages that seem like the streets of some strange, underground town.

At intervals are small, low-roofed chambers where two men are at work. One is the miner who makes the blasts, and the other is a laborer who loads the coal upon the cars and assists him generally.

They have little lamps in their hats, by which they see to work.

Their work is very dangerous.

Sometimes the walls of the mine fall in and the men are crushed.

Perhaps the greatest danger is from fire damp.

There are many gases in a coal mine. Sometimes these are set on fire by the lamps of the miners.

Then there is a terrible explosion.

A rush of flame goes through the tunnels, and scores of men are sometimes killed almost in an instant.

The mines in this country are not so difficult to work as they are in some places across the ocean. The tunnels are larger, and this makes the work easier.

Not a great many years ago, in the mines of England, boys and girls were employed to haul the coal cars along the tunnels.

They were harnessed to the cars by chains fastened to

belts about their waists, and the tunnels were so low that they sometimes had to crawl through them on all fours.

Now the cars are drawn by mules.

The mule stables are wide, lightless rooms, with bales of hay and straw about the sides, where the mules stand in solemn rows.

Sometimes the mules are kept for several years underground without once seeing the light of day.

After a long imprisonment they tremble with fright when they are first brought up from the darkness of the mine into the sunlight again, but after they get accustomed to the brightness they go almost wild with delight, and frolic and play like happy little colts.

It seems quiet, too, in the upper air as well as dazzlingly bright; for in the main avenues of the mine the noise is tremendous, with the crash of machinery as the elevator goes thundering up and down with its loaded or empty cars, the rattling of the cars along the tracks, the calls of mule boys and the deep rattle of a blast in some hidden part of the mine.

It is very interesting for visitors to go down into a mine, but how delightful it is as one gets into an elevator to ascend. Flecks of sunshine begin to appear on the walls above us, and then there comes a whole flood of light, and above is the blue sky!

We think that we never enjoyed breathing the fresh air so much before.

OIL.

When we speak of a well we usually mean a well of water ; but there are other wells in some parts of our country, wells from which oil is drawn instead of water.



OIL WELL.

In southwestern New York and in northwestern Pennsylvania, there are great beds of porous rock filled with coal oil and natural gas.

Some of the oil shows on top of the ground in places, but most of it is deep down in the rocks.

Holes are bored down through these rocks.

A derrick has to be built to hold the long steel drilling tools, which are so heavy that it would take two horses to drag them.

Steam engines are placed beside the derricks, and they keep raising and dropping the drills until a hole is made down through the rock, perhaps two or three thousand feet deep.

When the drilling is done, nitro-glycerine is lowered into the well in tin cylinders and exploded.

At first there is no effect to be noticed at the surface, but, after a little, if oil is found, a gurgling sound is heard

underneath, and the oil is soon thrown out like a fountain.

Fragments of stone are thrown to a height of a hundred feet in the torrent of yellow fluid.

Sometimes the oil has to be pumped from the wells ; from some it flows freely a long time without pumping.

There is a whole forest of derricks in this oil field.

Sometimes one of the great oil tanks takes fire. They



BLOWING OUT.

are often struck by lightning.

Then there follows a conflagration that lasts for many hours.

The dense black smoke sweeps over the country like a heavy cloud, and the intense heat is felt for a great distance.

Is the crude petroleum as it comes from the wells just the same as the kerosene oil which we burn?



FOREST OF DERRICKS.

Petroleum is put to other uses besides that of burning in lamps.

It is used in making gasoline and illuminating gas, in the preparation of India rubber and rubber goods.

Vaseline is one of the products of petroleum.

Oil is sent all over the world from the United States.



ON FIRE.

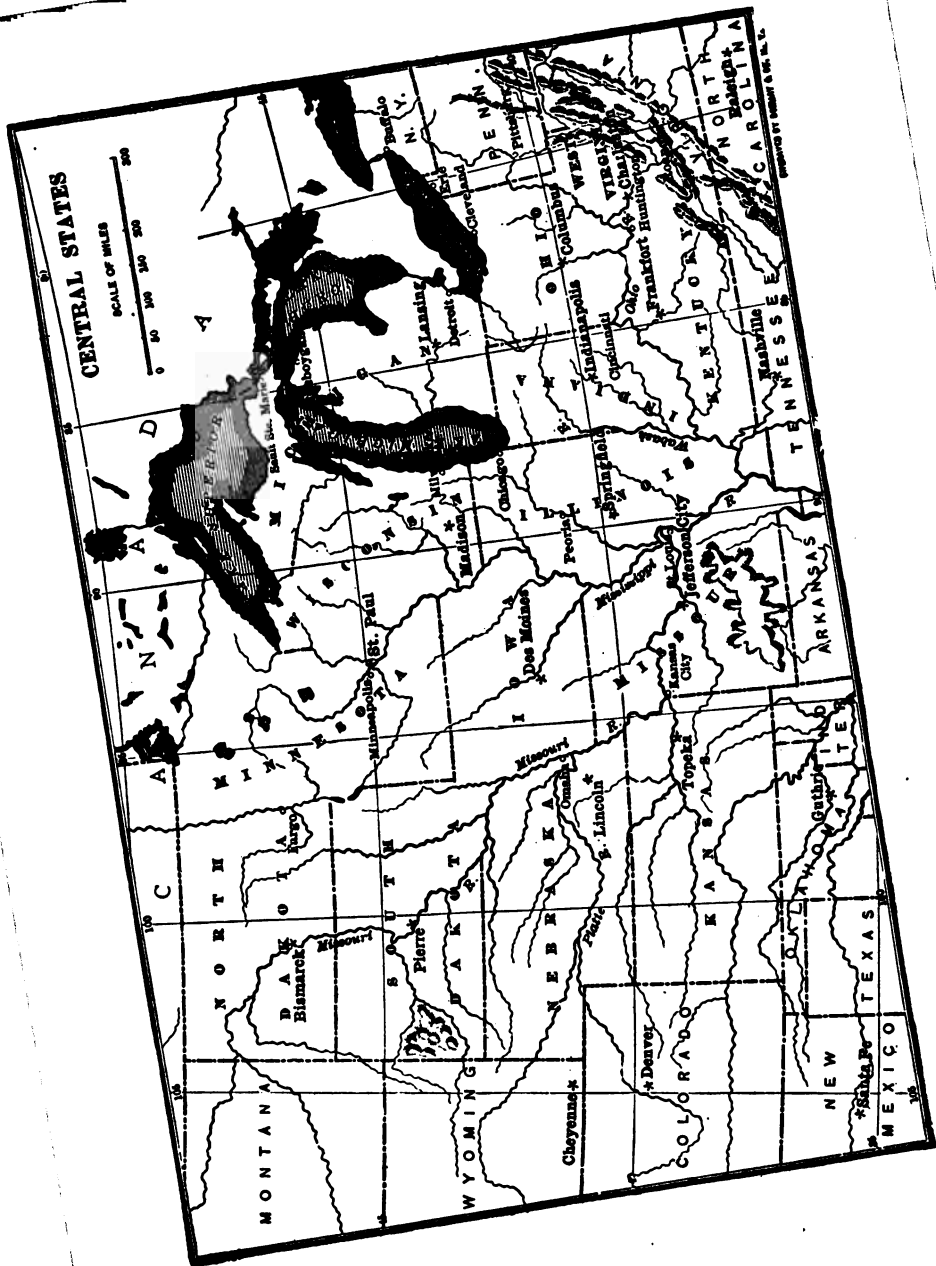
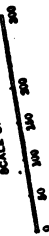
There are great tank steamers for carrying the oil across the ocean.

Lines of iron pipe have been laid from the oil tanks, which we see in the oil region, to many of the great cities of our country.

Indeed these pipe lines are so many that it is said that if they were stretched out in one single line they would reach entirely around the world.

CENTRAL STATES

SCALE OF MILES



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THE GREAT LAKES.

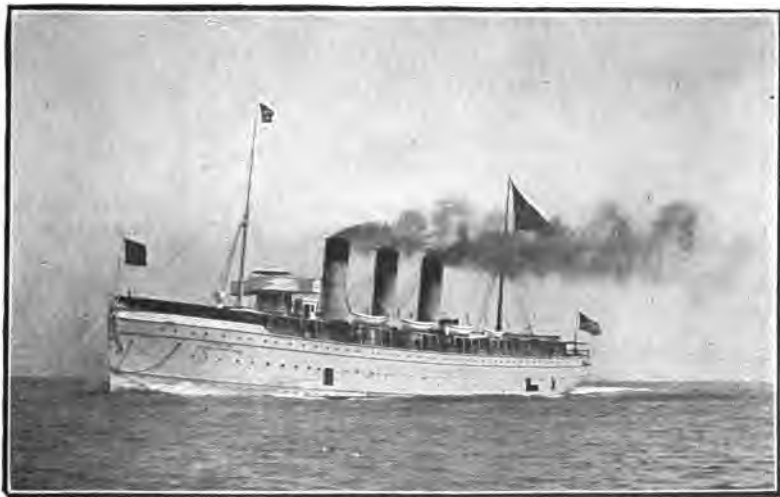
One of the largest lake steamers is the Northland. It is of steel and is almost as fine as the great ocean steamers.

Its name tells us of the region that it was intended to sail through. It is one of the passenger steamers that run between Buffalo and Duluth.

If you will locate these two cities on a map you will find upon which of the Great Lakes the Northland sails.

It is a very fast boat, sailing at the rate of twenty-one miles an hour. How far could it go in a day, if it did not stop at any ports? Do the ocean steamers sail any faster?

What would interest you most if you were to take the



STEAMER NORTHLAND.

journey up the Lakes, the wide stretch of water that reminds one of the ocean, the fine views of the shore as the vessel turns toward a port, or the Lake cities themselves?

You would be sure to notice the great coal and ore docks at Cleveland and Duluth and the enormous grain elevators at Superior and Buffalo.

One would be interested, too, in the different kinds of vessels, at anchor at the docks, and passing each other as they carry freight or passengers up and down the Lakes. Perhaps the long freight barges would seem most wonderful of all.



STEAMERS AT WHARF.

The Great Lakes lie on a long slope of land. This slope has three great terraces.

Lake Superior lies on the top terrace. Then comes a step of twenty feet to the level of Lakes Huron, Michigan and Erie. The great step down to the bottom terrace is between Lake Erie and Lake Ontario, where the Niagara River takes its wonderful plunge.

In going from Duluth to Buffalo only one step has to be taken, that between Lake Superior and Lake Huron. Do you know how a great boat like the Northland is able to take such a step as that?



ST. MARY'S RIVER.

The St. Mary's River is a wild, rushing stream between the two lakes.

A vessel could not go down those rapids, but a canal has been built around them, and into that all of the boats pass.

It is called the "Soo" Canal and is about ten miles long.

If you were taking the journey from Duluth to Buffalo, after sailing through the canal for some distance, your steamer would pass between high stone walls.

They would not seem very high to you, for they form the sides of a great stone box, which is nearly filled with water, and your boat would be floating on top of the water.



Looking off to the left from the deck of the steamer, you would see the St. Mary's River, or the Sault Ste. Marie, as the Canadians call it, rushing swiftly down among the rocks.

If you were to leave the boat, when it stops, you could walk along the edge of the wall to the great gates that form the end of the box that the steamer is floating in.

These are water-tight gates of wood and iron, that hold the water back in the lock, as the stone box is called.



LOCK.



LOCK GATE.

Looking over the edge of the gate, one can see the water in the canal twenty feet below. This is on a level with Lake Huron, which lies ahead of us.

Our steamer is to be lowered to the level of this part of the canal.

What would happen if these front gates were opened now?

But they are not opened. A steam engine closes two gates which are behind us at the entrance of the lock. That keeps the water of Lake Superior back for a time.

Then, by means of the engine, holes in the bottom of the lock are opened and the water flows slowly out.

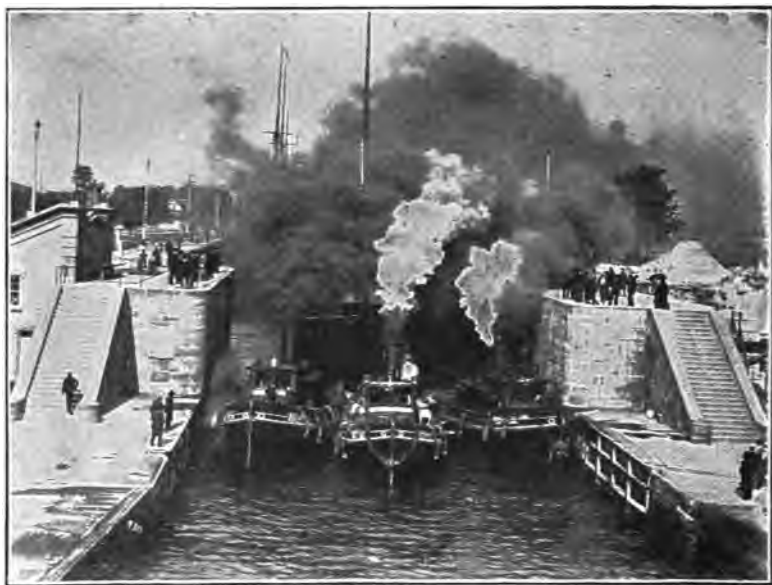
The passengers in the boat hardly realize that they are sinking, only the stone walls seem to rise on each side of them.

When the water in the lock is on a level with the water in the canal below, the gates are opened and then the steamer passes safely out and on to the broad expanse of Lake Huron.

Here are pictures of steamers passing through the gates.



STEAMER PASSING THROUGH LOCK GATE.



PASSING THROUGH LOCK.

Which way are they going, toward Duluth or toward Buffalo?

Of what use are the little boats in front?

Now that you have been told how the boats are lowered in the lock, can you explain how the boats going in the other direction are raised?

The wild St. Mary's River would not be a safe place to try to sail through, but it is a fine place for fishing.

What sort of fish are these which have been drawn up on the shore in a net?



LAKE TROUT—ST. MARY'S RIVER.

Might they be lake trout?

It is interesting to know that this lock in the St. Mary's Falls Canal, which we have been reading about, is the largest in the world.

Over on the Canadian side there is another smaller lock.

A great many years ago, furs were the principal commodity carried down the lakes. In those days a little lock was built at St. Mary's Falls, which was capable of raising and lowering only one canoe.

Now from one hundred to one hundred and fifty vessels pass through the canal every day.

The ice closes the lakes for about four months each year, but, during the other eight months, there is more freight carried through the Soo Canal than is received at all of the Atlantic, Pacific and Gulf ports of the United States put together.

The freight is principally coal, flour, wheat, copper, iron ore and lumber.

Can you tell which of these cargoes would be carried toward the west and which toward the east?

If instead of taking the Northland to Buffalo, were we to sail through Lake Ontario, we should go through many



EMPTY LOCK.

more locks. There are more than twenty locks in the Welland Canal which goes around Niagara Falls, for the step from Lake Erie to Lake Ontario is much greater than that from Lake Superior to Lake Huron.

There are other locks also in the canals about the rapids of the St. Lawrence River.

So, step by step, the boats are lowered from a height at Lake Superior greater than that of the Washington Monument down to the level of the sea.

Did you ever see a picture which gives a bird's-eye view of the city of Buffalo?

What do we mean by a bird's-eye view?

As we look at such a picture it looks to us much as such a view of any large city would, with its tall buildings, its long streets, and its steam and electric cars constantly moving.

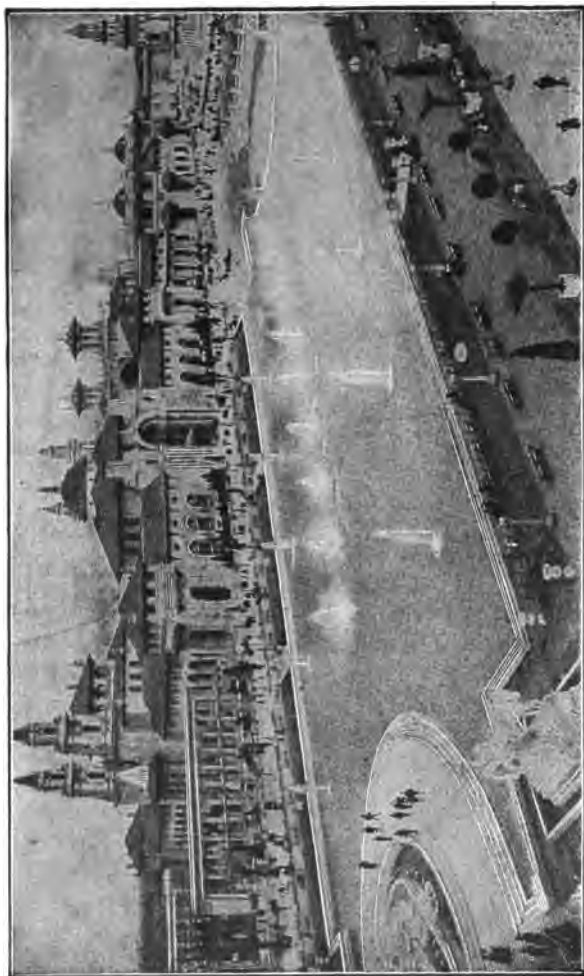
If we could see the lake shore, however, we should find enormous grain elevators, great trestles for loading coal upon the steamers, the iron ore docks, and other signs of lake traffic which we should be likely to find only in the cities on these inland seas.

Why was the great exposition, held at Buffalo, called The Pan-American Exposition?

From what countries did the people bring their products to the exposition?

One of the principal features of the exposition was the extensive and beautiful electrical display.

From what plant was the power taken?



COURT OF FOUNTAINS, PAN-AMERICAN EXPOSITION.

COPPER MINES.

The region about Lake Superior is rich in copper mines.

There is a story that the finest copper mines of Lake Superior were discovered by a pig!

These mines are situated on a rocky peninsula which juts out into the lake.

A pig, so the story goes, strayed away from the drove to which it belonged and wandered out over this barren peninsula.

Finally it fell into a pit, where the drover found it.

In trying to make its own way out of the pit, it rooted around among the rocks until it had turned up to view a great mass of copper.

The drover showed the copper to some men, and miners were sent to work the mine.

It was found that there was a great deal of copper in the whole region.

Shafts are sunk over one thousand feet in some of these mines, and hundreds of miners work in large chambers at the bottom of these shafts, blasting out the ore.

The ore is often found in solid masses weighing several tons. These are broken into pieces before they are hoisted to the surface and carried away by train or steamer.

Large fleets of vessels are required to carry this ore to the lake ports where the smelters are located.

What is copper used for?

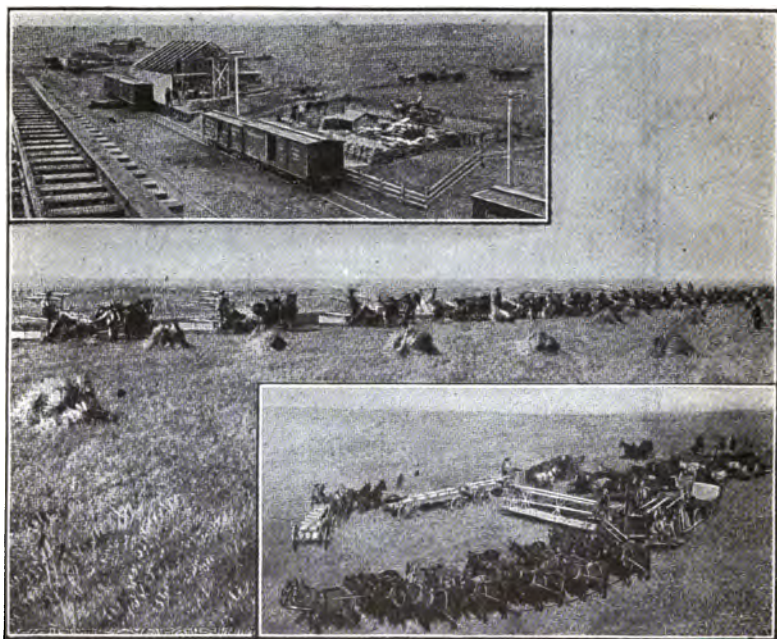
Perhaps some of the boys who read this have bits of copper in their pockets now.

WHEAT FIELD,

Machines do much of the work on the large farms in the West.

Some of the largest wheat farms in the United States are in Dakota.

The region north and west of the Great Lakes has been called "The Bread Basket of North America."



WESTERN WHEAT FIELD.

Millions of bushels of wheat are sent across the Atlantic from this region every year.

Have you ever examined the little wheat kernel?

Outside you will find the husk, which is just a protection for the kernel. There is nothing nourishing in this part of the grain.

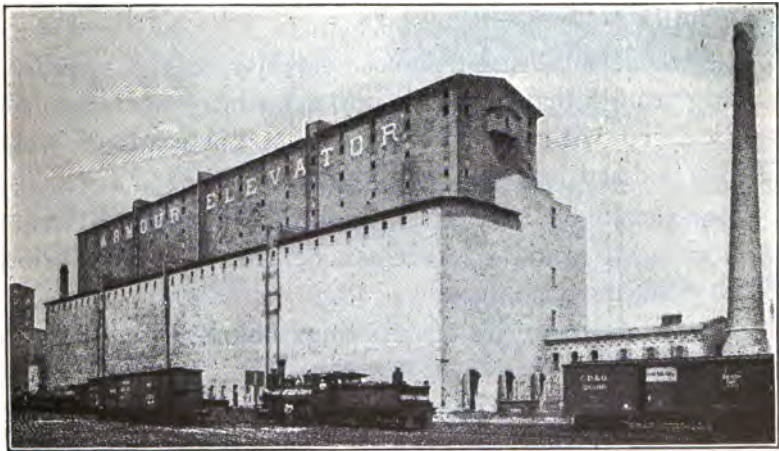
Next to the husk is the covering of gluten cells. This adds to the life-giving power of the kernel.

Then in the middle is the grain itself.

The first work of the flour mills is to remove the husks.

Are the gluten cells used in making the fine white flour? What is meant by flour of entire wheat? What kind of flour makes the most nourishing food?

From the farms the wheat is carried to the elevators.



GRAIN ELEVATOR AT CHICAGO.

These are great buildings for storing the grain.

The grain is brought to the elevator in cars. It is dropped from the car into a sort of pocket under the floor. In this pocket is the lower end of a line of belts armed with buckets of steel or zinc.

These buckets scoop up the grain and carry it to the top of the elevator.

Here it is weighed, then it is poured down into the enormous bins, where it is to be kept until it is ready to be shipped.

When it is taken out, it flows through pipes to cars or ships. Some grain is loaded on boats that take it down the Mississippi River, but most of it goes by the Great Lakes.

Minneapolis is on the Mississippi River at the Falls of St. Anthony. These falls furnish water power for the great flour mills.

The wheat is carried from the elevator to the mill by a moving trough that dumps it into a washing machine. Here it is carried with great force against a stream of water. Then it is dried by a blast of hot air.

It ought to be very clean, indeed, for it goes through eight separate cleaning processes, before it is spouted down to the grinding machines.

Then come five series of grindings before it is ready for packing.

The packers fill the bags and barrels, sew them and nail them up, and at last the grain is ready to start on its journey to the markets in the form of flour.

Flour is sent from Minneapolis not only to Europe, but to South Africa and China and Australia.

Minneapolis is called one of the "Twin Cities of the Northwest." What is the name of its twin sister?

This freight vessel is being loaded with grain at a Chicago elevator.

Isn't it a curious looking boat? Do you wonder that it is called a "whale-back?"

Many of these boats carry heavy freight on the lakes.

Through what lakes must this vessel pass to reach Buffalo from Chicago?

Would it have to pass through any canals?

Duluth, you know, is at the head of Lake Superior. It is built on the rocks that cover the rugged hillside about the harbor.



WHALE-BACK.

There is no other seaport in the world so far inland as Duluth. Some of the vessels from there sail out through the St. Lawrence River across the Atlantic Ocean.

What great piles of lumber we see in this vicinity!

There are many lumber mills at Duluth.

Where does all of the wood come from?

We should not need to ask that if we could go into the forests of Wisconsin, Michigan and Minnesota.

So many trees are cut down in the United States every

year, that if the logs were made into a bridge as wide as most country roads, it would be long enough to reach around the world.

Lumbering in the Lake Region is carried on during the winter, as it is in the Maine woods.

The chopping is done according to a certain rule.

Some one who knows which trees are most suitable, first goes through the cutting grounds and marks the trees to be felled.

Two men with a long saw make the first cut in the tree. Then the choppers chop above and below the saw cut until the tree is cut through.

What a crash there is when it falls to the ground!

Then the limbs are trimmed off and the tree is sawed into logs of the right lengths.

A road must be made to the nearest stream before the logs can be moved. After the snow has been beaten down, water is sprinkled on with a machine. This freezes and makes a slippery road along which the heavy loads can be easily pulled.

In the spring, when the ice in the river melts, several men have to go with the logs to see that they float down stream.

If any of the logs should catch among the stones, they would stop the progress of the logs coming behind, and then a jam would be formed. That is, the logs would become wedged tightly together and would make a bridge, which would prevent the logs from moving along to their destination.

If a jam occurs, the men jump out on the logs and force them apart with pikes.

These drivers, as they are called, have the soles of their boots covered with sharp nails, so that they may have a sure footing on the rolling logs.

Much of the wood from Michigan is pine.

What is that used for?

STOCK YARDS.



REFRIGERATOR TRAIN.

A view of one of the great plants connected with the Union stock yards, in Chicago, looks like a city in itself. Trains of cars are in the streets themselves, and inside the stock yards. Delivery wagons are going in every direction. But even these things give only a slight idea of the amount of business done here.

You can catch a glimpse of the feeding yards off at the left.

The stock that is raised on the farms and ranches of the West is brought daily to these stock yards on the cars.

The animals are all first driven to the feeding pens. Each of the pens has a large trough for water and one for food. There are twenty-five miles of watering troughs in these yards and fifty miles of feeding troughs.



CATTLE PENS.

There are usually over one hundred and fifty thousand animals in these yards at a time.

Can you imagine the noise made by the lowing and grunting and bleating of such an army of hungry creatures?

Somebody has said that the hogs go into the stock yards

live animals and come out in the form of hams, bacon, sausage, lard, buttons and hair brushes.

It is true that nothing is wasted in this busy city.

The bones are turned into combs and brush handles and buttons. The bristles are made into brushes. The hoofs are used in making glue.

The wool of the sheep is pulled from the skins, and after it is washed and dried, it is put up in snowy-white bales and sold to the woolen mills.

Not all of the meat is sent out in large cuts to the markets. Much of it is canned.



DRESSING HOGS.

A visit to "Packingtown," as the packing department is called, is interesting.

When the meats are cooked they are pressed into cans which are sealed. They are then heated by being plunged into steam. This forces to the top any air that is in the cans. If air were left in the cans could meat be kept long?

When your mother preserves fruit doesn't she have her cans'air-tight?

After the steam heat has forced the air to the top of these cans, the covers are perforated by a needle. The air rushes out of this hole. Then the cans are sealed again and are ready to be sent to any part of the world.



COOLING ROOM.

It is interesting to visit the tin shop, where machines take sheet after sheet of tin and turn out bright, shining cans. It seems as if the machine knew how to do this all alone, without the help of man, but it takes a man to keep the machine running.

Everything about all of the factories is so wholesome and clean that it is a pleasure to watch the work.

It is hard to realize, however, the amount of work done in each department. Think of miles of sausages being made in a factory each day!

Down in the cellars, where part of the meat is being salted, the cold is intense. The men who work there wear ulsters on the hottest days.

One can be sure that all of the meat sent out from these yards is sound and good.

Inspectors are appointed whose only business it is to see that the animals are healthy when they are brought to the yards and that the meat is all right for use as it hangs in the great cold rooms.

Perhaps you had beef or mutton for your breakfast.

Where does your butcher buy his meat?



ZINC MINES NEAR PROSPERITY, MO.

ZINC MINING—MISSOURI.

In southwestern Missouri, where there have long been lead mines, the miners used to find a peculiar looking substance that they did not know the name of.

It was found mixed with the lead ore and the miners threw it away. Finally, some one, who knew about minerals, discovered that this substance was zinc ore.

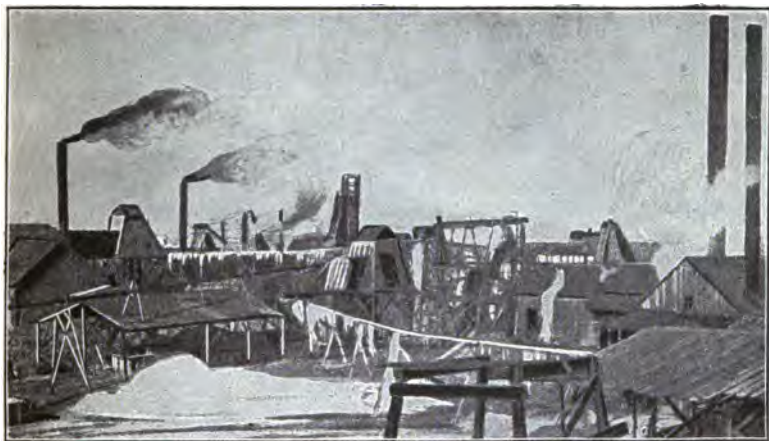
The miners stopped throwing it away, and now that ore, which was thought to be useless, brings millions of dollars to the owners of the mines.

What is zinc used for?

The miners call the zinc ore "jack."

Everybody in the vicinity of the mines is interested in "jack."

People who have worked at other business, and have saved a little money, sometimes rent land in this locality and hire a few miners to dig for them.



MINING PLANTS NEAR WEBB CITY, MO.

It is said that even bootblacks and newsboys are anxious to invest their little earnings in the mining business.

Some of the people have become very wealthy. Fine towns have grown up near the mines, and beautiful residences have been built.

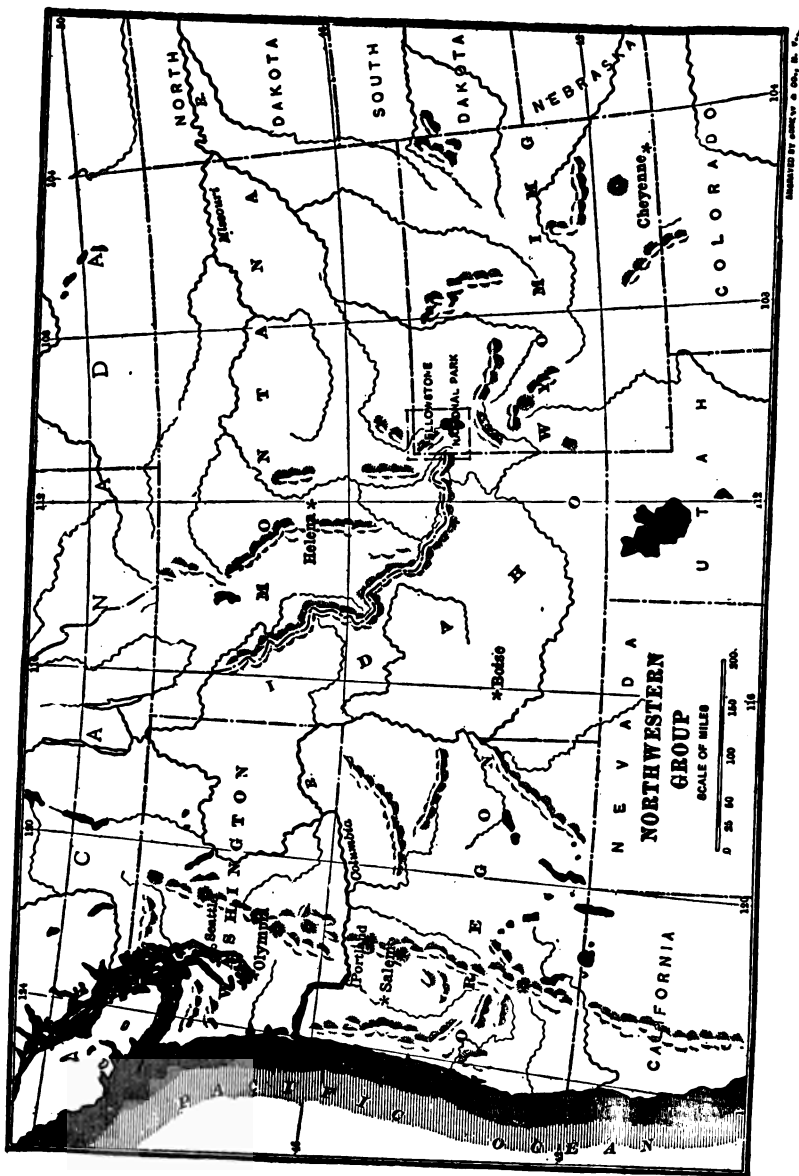
You have heard of the house that Jack built.

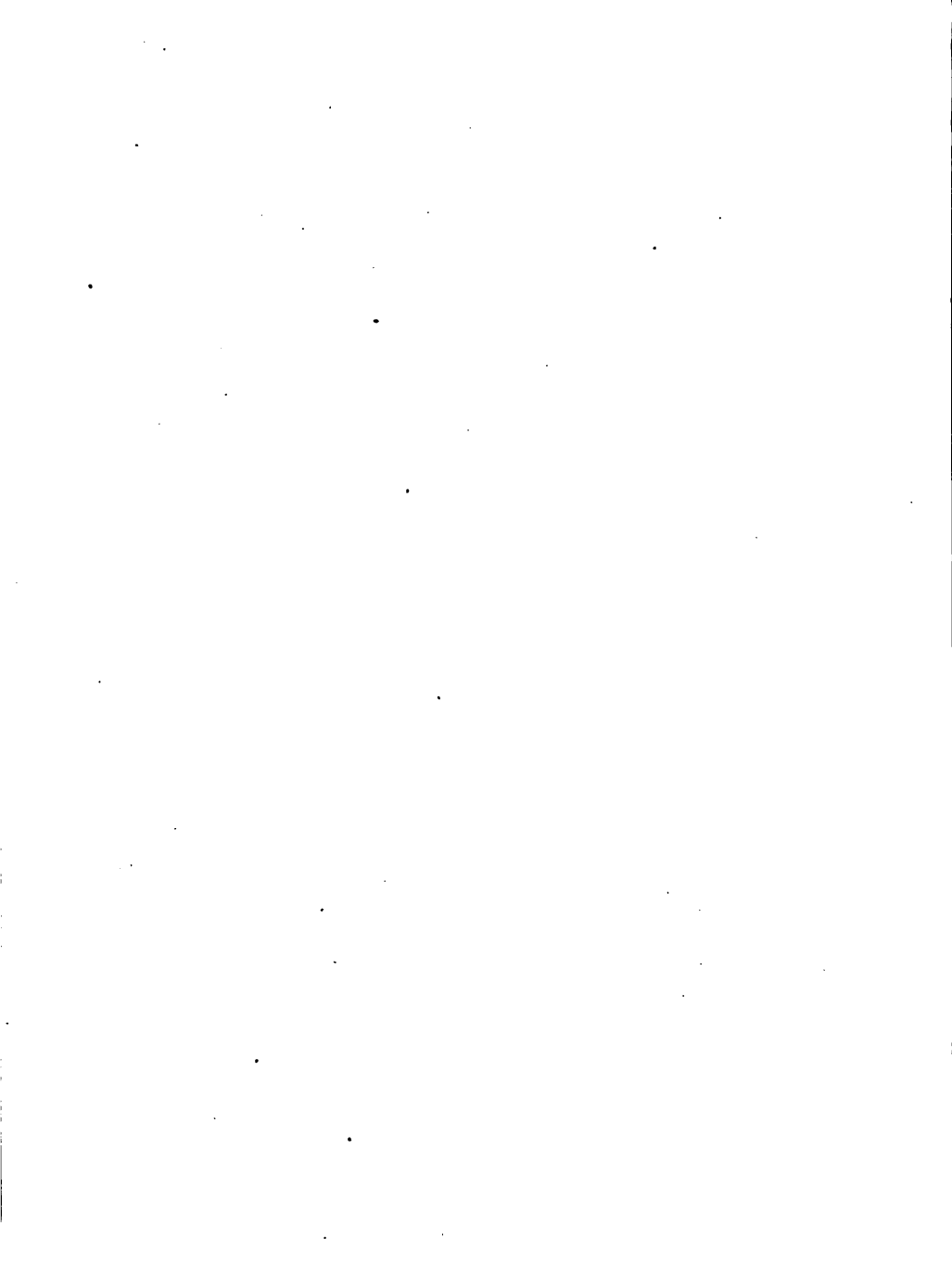
Here you may see it multiplied many times over, for it was the money obtained from the "jack" of the mines that made these fine houses possible.



AT THE BOTTOM OF A SHAFT.

It is hard work in these mines, and the air at the bottom of the shafts and in the drifts is often very close and impure.







PICKING ROSES IN A CALIFORNIA GARDEN.

CALIFORNIA.

Did you ever read the fairy story of the princess who had a "wishing-rug"? All she had to do was to sit down on the rug and wish to go somewhere, and she was there in a minute.

There is a place in our country where one can go from summer to winter in an hour and a quarter. That is almost as wonderful as the story of the princess, isn't it?

This place is near Pasadena, a city of Southern California.

This picture was taken at Pasadena.

It was ten o'clock on a January morning when it was taken.

Immediately after, a number of men and boys took their overcoats on their arms, and started for a ride in the cable and electric cars.

Did you notice the mountains, beyond the garden? That



INCLINE RAILWAY—MT. LOWE.

is the Sierra Madre Range. One of the high peaks is Mt Lowe. They went up the Mt. Lowe railway.

It was a wonderful ride.

Part way up the cars stopped, and they looked down upon the country they had left. It was spread out below them

like a great, flat checker-board. The squares were the fields and the orange groves. The houses looked like tiny specks.

In an hour and a quarter from the time they started from among the flowers, they were having a game of snowball near the top of the mountain.



SNOWBALLING ON MT. LOWE.

Why is it so much colder at the top of a mountain than at the bottom?

Southern California has been called the Summer-land. It is never cold there except up on the mountains.

At Christmas time roses are always in bloom. Such roses! They climb to the roofs of the houses and have thousands of blossoms.



ROSES IN BLOOM AT CHRISTMAS TIME.

Bees are humming about the fragrant heliotrope. Did you ever see a heliotrope plant climbing up to the second story windows? That is the way they grow in this Summerland.

One of the cities of Southern California is called Los Angeles. What does the name mean? One would expect a beautiful city with such a name, and indeed it is.

There are fine streets, large parks, and beautiful houses. Most of the houses have wide yards about them and lovely gardens. The plants are large and in full bloom!



RESIDENCE AT LOS ANGELES.

How tall is the tallest man you know? In Los Angeles gardens geraniums grow to the height of ten feet. It would take a pretty tall man to reach the top, wouldn't it?

How large is the yard about your schoolhouse?

What would you think of a field containing twelve acres of carnations or twenty acres of calla lilies?

Many vegetables grow to an enormous size in this mild climate. Pumpkins are raised which sometimes weigh over a hundred pounds.

There are many fine orange groves near Los Angeles. Sometimes rows of splendid pepper-trees line the roads leading to them.

The pepper-tree is one of the most beautiful to be seen in this region. How feathery the drooping foliage is, almost

like the fronds of a fern! It has a tiny blossom and scarlet berries that are like jewels strung in a row.



SOME PUMPKINS.

FRUIT RAISING.

If you had an orange for your breakfast, perhaps it grew in one of these immense groves in Southern California. Some of our very finest oranges come from there.

A good many years ago it was thought that oranges could not be raised successfully in California. It did not rain often enough to keep the ground moist.

But now people have learned how to irrigate the land.

Canals are made. The water from the rivers is turned into these canals and is carried in different directions. The canals are broad ditches lined with cement.



ORANGE PICKING, LOS ANGELES COUNTY, CALIFORNIA.

Smaller ditches run from the larger ones out toward the different groves. A small flume, made of wood, is laid along the ground on the upper side of the land where the grove is located.

Holes, one inch in size, are bored in the side of the flume, with spaces of a few feet between them. Wooden buttons are placed in the holes.

When water is needed for the orange grove, the buttons are taken out. The water from the canals runs into the flume, then out through the holes into little furrows dug between the rows of trees.



IRRIGATING CANAL.

This is done several times a year. The water is allowed to run in little rills for two or three days at a time.

Do you know how fragrant the waxy white orange-blossoms are?

How sweet the air must be in a great orange grove!

Sometimes the trees are so heavily laden with fruit that the branches have to be propped up to keep them from breaking.

In picking, great care is taken not to bruise the fruit. Each orange is clipped from the tree.

At the packing house, the oranges are placed in a machine called a grader. This machine assorts the fruit into lots where all of about the same size are placed together.

Then each orange is taken out by hand, a piece of tissue paper is twisted about it, and it is placed in a box for shipment.

In the freight cars the boxes stand on end, with an air space between the rows. They are fastened with braces so that they will stand firm.

The car is kept cool with ice, and the oranges start on their long journeys to all parts of the country.



A WINE "SELLER."

Isn't this a jolly looking fellow, with his wine-cup in his hand ?

He is one of the grape gatherers. Most of these grape gatherers are Swiss or Italians. They can earn better wages here than in their own countries. Their employers in California treat them well and give them good fare.

In their blue blouses and gay neckerchiefs, they start out early in the morning.

A pile of empty boxes is placed by each picker. A good picker can pick a ton and a half of grapes in a day.

Think how fast he must work and how large and plentiful the bunches must be.

A bunch of grapes a foot and a half long is not an uncommon sight in Southern California.

The vineyards are planted on a slope. At the foot of the hill is the great stone winery. A four-horse team carries the boxes of grapes to the winery.

There they are stemmed and crushed. Then the mass is placed in the large open-topped tanks or vats.

If the wine is to be white, the skins are removed before the grapes are put into the fermenting vats.

If it is to be red, the skins are left with the pulp.



BOXES FOR
GRAPE GATHERERS.



STIRRING THE MASS TO BRING OUT THE COLOR.

These men are busily stirring the mass to bring out the color from the skins.

The juice stays in the fermenting vats nearly a week. Then it is drawn off and left in tanks to settle. This takes about three months.

Then the wine is ready to sell, but it will be better if it is kept much longer before the bottles are opened.

Do you know that raisins are made by drying grapes? Where does the sugar come from?

The gatherers are careful to handle the bunches only by

the stem. Do you think the bloom would remain on the grapes if they were touched?

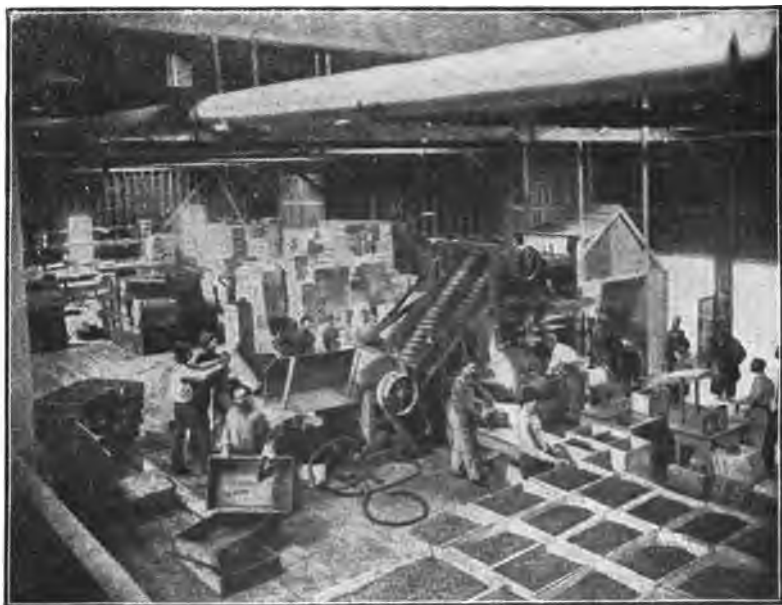
See the long rows of trays between the vines. The grapes will lie here to dry in the sun for about a week.

How do you suppose the men turn them over to dry the other side without touching them?

They place an empty tray over a full one and then turn the grapes upside down.

In ten or twelve days the grapes are sufficiently dried to be taken to the packing houses.

Then they will go through the "sweating" process.



STEMMING AND GRADING RAISINS.

They are put into boxes in layers. A sheet of paper is put on the bottom of the box, then a layer of grapes ; then another sheet of paper and another layer of grapes, until full.

The loaded sweat boxes are left to stand in a dark, airtight room for two or three weeks. Then there will be just the right amount of moisture left in them.



OSTRICH FARM—LOS ANGELES COUNTY, CALIFORNIA.

THE FEATHER CROP.

We have been reading about the orange crops and the grape crops in California. Can you tell anything about the feather crop?

Did you ever see an ostrich?

What a tall, ungainly-looking bird it is! What a little head for such a long neck! Notice the queer, two-toed, hoof-like feet. The ostrich fights with his feet. He kicks forward with great swiftness and force. He strikes a blow that might easily kill a man. So the keepers have to look out for those ugly feet.

Of course, it is for his feathers that the ostrich is valuable. Most of the feathers that we see have been colored. There are about a thousand feathers on a bird. Only about three hundred of the wing and tail feathers are used.

The most valuable ones are the twenty-five long, white plumes on each wing of the male bird. The rest of the feathers are black. The feathers of the young birds and of the female are drab.

The plucking takes place every eight or nine months after the birds are large enough to have good feathers.

When a bird is to be plucked, he is coaxed, by feeding, into a little railed enclosure. There his neck is seized, and a long, narrow bag, like a stocking, is drawn over his head. While he is blinded he is not so fierce. Little holes are left for him to breathe through.

Three or four men sometimes have to hold him. They are



careful not to stand in front of him. He cannot kick backwards.

The feathers are sent to San Francisco to be washed and colored and curled. The white ones are bleached to make them whiter still.

How much does a fine ostrich plume cost?

INDIAN BASKETS.

Did you ever see a basket like this one? Can you tell what it is made of?

The foundation is made of willow sticks. Fine grasses are woven in and out so closely that the baskets are quite watertight. Some colored grasses and the dark stems of maiden-hair ferns are woven into the pattern.

What a long time it must take to make baskets so finely woven!

There are no better baskets made in the world, it is said, than some of these made by the Indians of California.

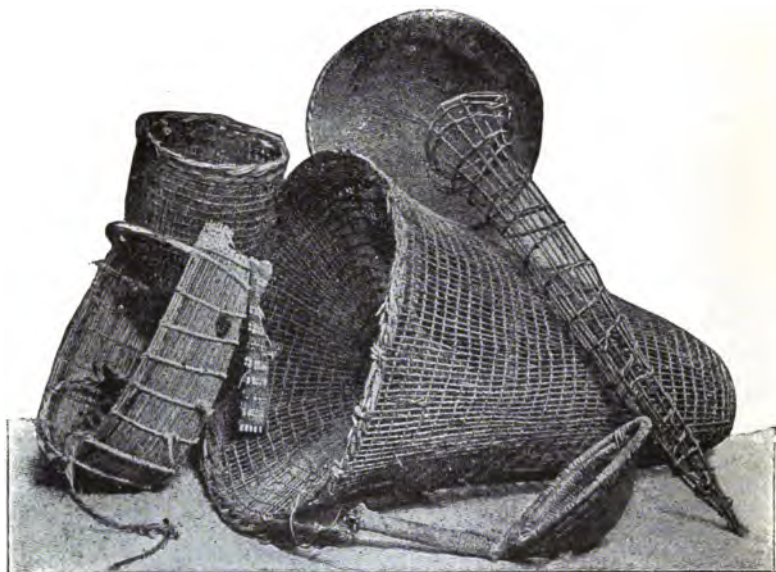
They cost a great deal of money. Some baskets, about the size of the one that the little child is looking at, cost two hundred and fifty dollars.

The small baskets are used for holding different articles. The coarse-meshed ones are for carrying large packages.



INDIAN STORAGE BASKET.

With the Indians they take the place of little express wagons. Some of them take the place of baby carriages. Coarse, stocking-shaped baskets are used for trapping and carrying fish. Many of the finely woven ones will hold water.



INDIAN BASKETS.

The women do most of the weaving.

If you saw a basket that had a little opening in the pattern that runs round and round, you would think that the weaver had made a mistake, wouldn't you?

Not at all. She is afraid that an evil spirit may have gotten into the meshes of her basket, and so she leaves a little place for him to go out!

MONTEREY.

Travelers tell us that one of the most beautiful hotels in the world is the Hotel Del Monte, at Monterey.

Look for Monterey on the map.

What would you expect to see there from its location?

What does the word Pacific mean?



THE FAMOUS CACTUS GARDEN AT DEL MONTE.

But sometimes there is a heavy surf at Monterey, and a great storm rages far out at sea. Then you would think a mistake had been made in the name.

At the Hotel Del Monte you would enjoy the fine lawns and trees and flowers. How curious the cactus garden is!

Visitors from all parts of the United States and from Europe come to see these gardens.

Then you would take the famous sixteen-mile drive on the beach.

Out into the bay juts Lover's Point, a mass of gray granite rocks.

If you should come out here at sunrise you would see, on some mornings, numbers of bright blue boats. What can call all these boatmen out so early?



HARPOON GUN.

Do you notice that curious contrivance at the end of the boat? That is a swivel-gun, from which the captain is going to fire a heavy harpoon.

These men have caught sight of hump-backed whales out in the bay, and they are ready for the chase.

Just in front of the gun lie twenty-eight fathoms of heavy whale line. Whalers do their reckoning in fathoms, you know. The line is coiled in such a way that, when the gun sends the harpoon flying, there will not be a kink or a snarl in the rope.

There is nearly half a mile of rope attached to this coil. That may all be needed after the harpoon is driven into the huge body of the whale, for he will suddenly plunge away,

dragging the boat and the sailors after him at a terrible speed.

After a little the whale grows weaker and ceases to plunge so violently. Then the rope is slowly drawn in, and the boat can come near to the great, black monster.

This time the gun is charged with a bomb which kills the whale.

It will be three days before the great body will rise to the surface of the water. Then it will be towed ashore.



CUTTING BLUBBER FROM HUMPRACK WHALE.

What becomes of the blubber that is cut from the whale? Do you know of any other portion of the whale's body that is useful?

THE YOSEMITE AND THE BIG TREES.

How tall is the tallest church spire in your town?

If we were to travel through California, perhaps the most wonderful thing we should see would be the Big Trees. It is hard for one who has not seen them to imagine how such giants look.

The very tallest of them is four hundred feet high.

Think how large around such a tree must be. Thirteen people once took hold of hands and with their arms stretched as far as possible they could just reach around the trunk.

Through the base of one of the trees a stage road has been cut, and a coach and four horses can easily stand in the opening.

Many of the trees have been named. The one through which the road has been cut is called Wawona.

In one of these trees, called the Giant, General Fremont once camped for several days.

On the stump of one is built a large summer house.

These trees are a kind of evergreen. The leaves resemble those of the arbor-vitæ. The cones are about two inches long, and the seed from which these giants grow is said to look very much like parsnip seed. The bark, which becomes about three feet thick, is cinnamon brown in color. There are deep, vertical grooves in the surface, so that the trunks look like fluted columns.

Where have you seen fluted columns?



"WAWONA," THE TUNNELED MARIPOSA MAMMOTH IN THE YOSEMITE.

I need not tell you that these Big Trees are very old. Do you know how the age of a tree can be judged? It is said that some of these trees were standing in the days of King David and probably long before. How long ago was that?



A SECTION OF A YOUNG TREE.

The Big Trees grow on the western side of the Sierra Nevada Mountains.

Not far from the Mariposa Grove is the beautiful Yosemite Valley.

California, you know, is a very large state. The seacoast is about as long as the Atlantic coast from Maine to Georgia. We have been reading mostly about the southern part of the state. The Yosemite Valley is near the center, from north to south. It

runs across the middle of the Sierra Nevada Range.

One gets the first view of the Yosemite from a high place called Inspiration Point.

There it lies below one, a valley about seven miles long and in places nearly a mile deep.

Pictures help us to think how different points in the Yosemite look.

On the next page is a picture of the Three Brothers. They are great masses of granite rock, the tallest point four thousand feet above the valley.

Think how many feet there are in a mile, and it will help you to realize a little the height of these rocky giants.

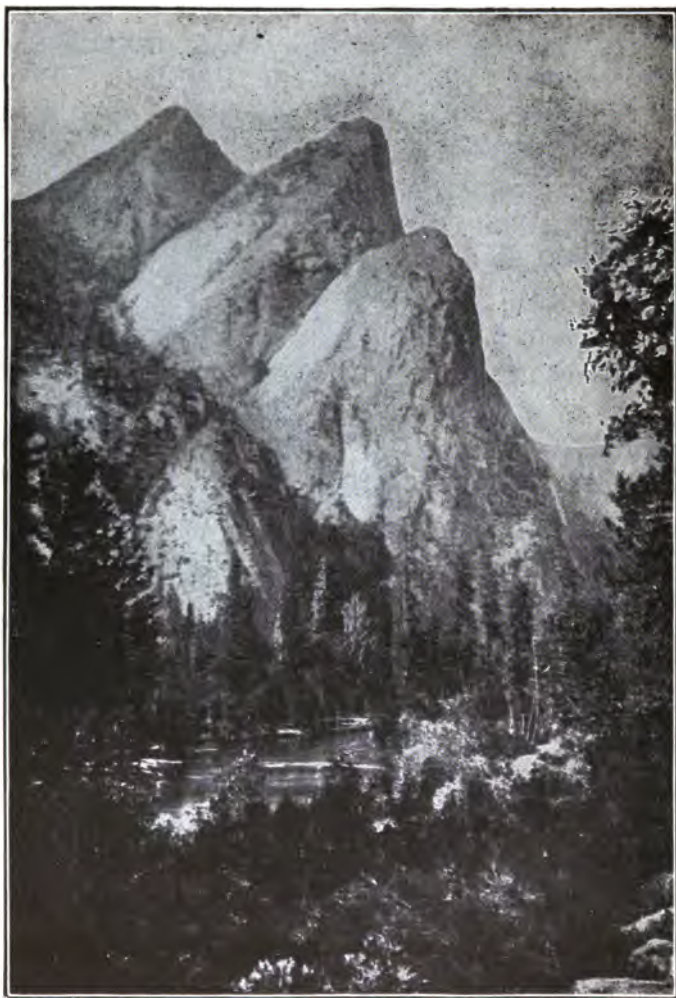
Enormous cliffs of fantastic shapes form all the boundaries of the valley. Over these cliffs, at various points, leap the beautiful mountain streams to fall in wonderful cascades to the river so far below.

How the waterfalls shimmer in the sunlight! How the rainbows shine in the snowy spray that drifts far out from the sides of the gray rocks!

We shall never quite realize how beautiful it is in this wonderful valley, I suppose, until we have been there ourselves.



GLACIER POINT—YOSEMITE VALLEY—3,300 FT.



THE THREE YOSEMITE BROTHERS.

SAN FRANCISCO.

This narrow street doesn't look like a street in an American city, does it? Notice the upright sign on one of the houses on the left side of the street. It would make one think he must be in China.

This is, indeed, Chinatown, but it is in the city of San Francisco. Thousands of Chinese live here. They have a city within a city.

It is most interesting to visit Chinatown at night, under the soft glow of paper lanterns. A guide goes with each party to show the way among the crowded streets.

Would you like to go into one of the large restaurants?

Here the food is set out in bowls, and each person, if he wishes, helps himself with a pair of ebony chop-sticks. The food may not all look inviting to us, but some of the sweetmeats we may like, and the tea is very fragrant.

Do you know how many thousand Chinese live in San Francisco?



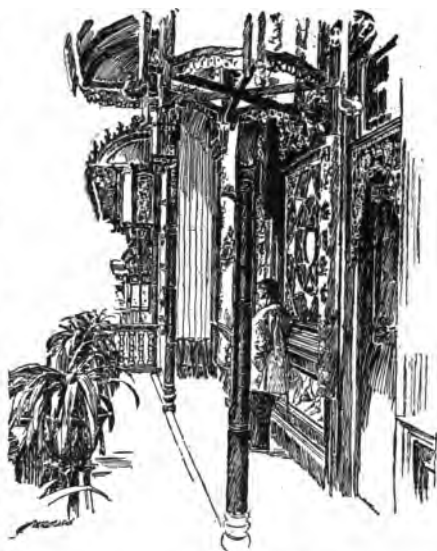
A STREET IN CHINATOWN, SAN FRANCISCO.

This tea is made in little cups with covers, each cup serving as a little teapot.

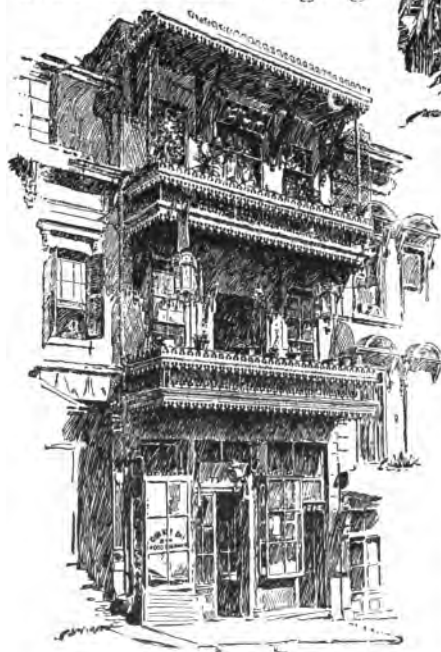
Would you like to have your fortune told?

Then you must go to the temple or joss-house.

A tiny flame burns dimly in a corner, and near it stands a huge gong. An attendant strikes this gong



BALCONY OF JOSS-HOUSE.



CHINESE RESTAURANT.

to arouse the god, then prostrates himself three times before the altar.

Then follows the tossing up of joss-sticks. These sticks are numbered. When three have fallen to the floor, in the tossing, they are picked up and the numbers on them are supposed to tell on what pages in the "fate-book" your fortune may be read.

It is all very interesting, but one is glad to leave the crowded streets of Chinatown, where some of the tiny apartments seem better suited for pigeon-houses than for homes for men and women and little children.

San Francisco is built on hills sloping down to the bay.

From the hills one looks down upon the fine streets and buildings of the city, the bay, the ocean, the distant islands and the passing ships.



CLIFF HOUSE, SAN FRANCISCO.

The Cliff House is a point that we should like to visit.

Notice the three rocks in front of the hotel. These are the seal rocks. From the shore it is interesting to watch the seals, which can always be seen there in great numbers.

They like to lie and bask in the warm sun.



LIFE-SAVING APPARATUS.

These seals are protected by law so that no one can shoot or harm them.

If we ever leave our country to cross the Pacific Ocean, we shall probably sail from San Francisco harbor.

What is the entrance to the harbor called?

If one looks out through the narrow opening when the sky is bright with sunset, it must seem like a very appropriate name, Golden Gate.

Since our government took possession of the Philippine Islands, San Francisco has become a very busy port, with large transports steaming in and out almost daily.

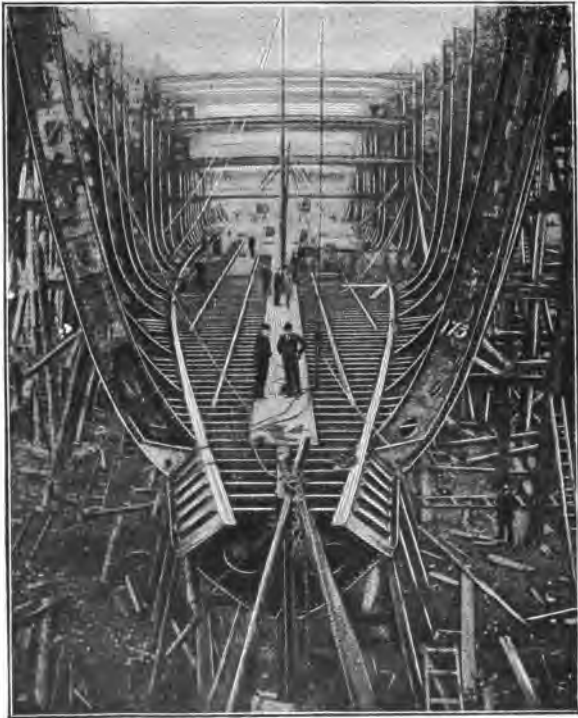
Most of the soldiers who have fought in the Philippines embarked from this port, and the survivors after their term of service have been cheered by the beautiful sight of the Golden Gate, as they were homeward bound.

UNION IRON WORKS.

If we visit San Francisco we shall wish to see the Union Iron Works; where many large war-ships have been built for the navy.

The Oregon was built there.

Have you read about the journey that the Oregon was suddenly called upon to make during the Spanish War?



FRAME OF THE OREGON.

How large and strong she looks, and how carefully she is built in every part !

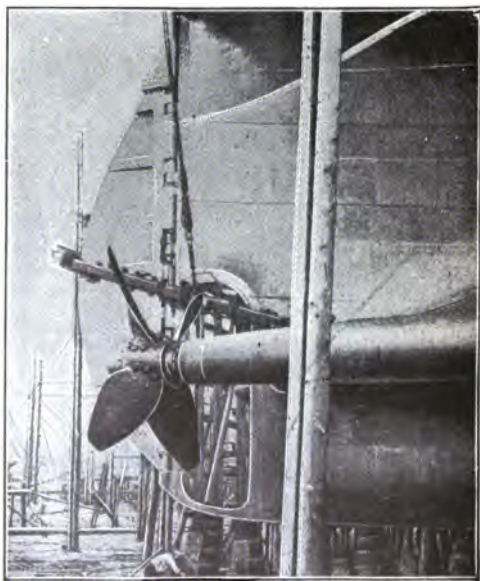
A large portion of the bottom of a war-ship is double, and it is divided into water-tight compartments.

These are separated from each other by stout partitions called bulkheads, so that if a hole should be forced into one compartment the water could not reach the others and flood the whole ship.

Between the partitions is a space large enough for a man to pass through. It is necessary that every part of the ship be inspected very often, that everything may be kept in good order.

There are two sets of powerful engines to drive the great twin propellers. The blades of these propellers are higher than a tall man.

The engines are placed in engine rooms surrounded by water-tight partitions. Both engines, or either one, can be worked from each engine-room, so that if a shot should destroy one engine it would not necessarily



RUDDER SHAFT AND ONE OF THE PROPELLERS.

disable the vessel. The coal is stored in bunkers built along the sides of the ship, and so serves in part as a protection for the engines and boilers.

Some of the large guns on these battle-ships can throw a shell twelve miles.

Where are the officers of the United States Navy trained before they can take command of war-ships?

CLIFF-DWELLERS.

Before Columbus sailed across the seas, there lived, in what is now northern Arizona and New Mexico. people



ANCIENT CLIFF DWELLINGS.

whose ruined homes tell us all that we know about them.

The Cliff-dwellers, we call them, because most of their

houses are found built into the sides of steep, rocky cliffs.

These curious dwellings make one think of the little holes in which cliff-swallows live on river banks.

Many things are found within the ruins which would have crumbled to dust long ago if it were not for the dry climate, which keeps everything safe from decay.

Many pieces of pottery are found, and cooking utensils and even feathers and tassels and bits of garments.

There are mummies, too, that show us, even now, something as to how the Cliff-dwellers looked.

They were dark-skinned people, with long, coarse, black hair. The backs of their heads were so flat that they must have been tied against boards when they were babies.

Parts of hide jackets and fur caps are found, and many kinds of sandals.

The hair-brush of the Cliff-dweller was a tightly tied bunch of stiff grass with one end trimmed square. We know just what these brushes were for, for the Cliff-dwellers weren't very dainty in their habits, and coarse hairs still cling to some of the brushes.

Different relics show us that they were hunters, jewelers, tailors, basket-makers, weavers, potters, farmers and masons.

The work of the masons interests us most to-day.

Were ever such curious houses built before or since?

It is thought that the Cliff-dwellers were driven to these gorges and mountains to get away from their enemies. Surely they must have felt pretty safe in such dwellings as these!

Many of the ruins contain round chambers with a narrow



RUINS OF MESA VERDE.

stone bench along the wall and a pit in the center for a fire.

This was probably the family sitting-room.

Stones are sometimes left out in the walls, and little square openings are thus formed.

Did the housewife keep her treasures there, her pretty jars and baskets?

Stout timbers which form the floors of the higher rooms are sometimes left sticking through the walls outside. Sticks were tied across these, and they made cozy little balconies, where the boys and girls doubtless liked to play.

They didn't have very good yards, you see.

We do not find traces of any domestic animals except the turkey. Blankets are found made of turkey feathers, and pictures of turkeys appear on various dishes.

ALASKA.

Did you ever hear the conundrum, "What large city is nearest the middle of the United States, from east to west?"



Weren't you surprised to hear "San Francisco" given as the answer?

We think of San Francisco as being on the very western edge of our country, and so it is in one sense; but we easily forget about Alaska, which extends nearly as far west as the distance from New York to California.

It is only within a few years that we have heard much about Alaska.

For many years, however, miners have forced their way inland by the Dalton trail over the Chilkoot pass, to the head of navigation on the Yukon River.

Some gold has always been found there, but not enough to pay very well for the hard work and the perilous journey.

In the summer of 1896 a man named McCormick went fishing for salmon in the Klondike River.

After he had stretched his net he went on an exploring expedition up a tributary of the river.

Here he came to a gravel bank where he dug out a few

feet of dirt. He washed it and found that he had as much as a dollar's worth of gold in a pound of dirt.

How the news spread **after** he had told a friend or two, and how all of the miners in Alaska turned toward the Klondike region!

In some places the dirt yielded ten dollars to the pound.

No such amount of gold had ever been found before in the same amount of earth.

The story of their findings went all over the world, but people were slow to believe it.

In July, 1897, however, there sailed through the Golden Gate and up to the docks of San Francisco a ship from the Yukon River.



A YUKON MINER.

It contained about forty ragged, weather-worn men and a cargo of something wrapped in blankets and skins and packed into bottles and cans. You will guess what was in the packages—gold dust and gold nuggets, more than a million dollars' worth.

Then began a great rush from all parts of the country for the wonderful gold fields.

Did you ever read the story of Jason, who sought for the Golden Fleece? Gold seekers have always met with perilous adventures.

It is difficult, even with pictures to help us, to realize the hardships of that journey over the Chilkoot pass to the Klondike.

In the roughest part of the journey the road rises half a mile as one goes forward two miles.

The hill is so strewn with boulders that all of the packs must be taken from the backs of the animals before they can be driven up such a path at all.

In spite of the hardships to be encountered, some towns have grown very fast in the mining regions. Nome is one of these.

These towns are so far away that the miners seldom hear from home.

When the mail does come in at Dawson City, the newspapers received were published a month before.

The men are glad enough, however, to hear anything from the country they have left, even though the news must be pretty old.

In the earliest days of the mining excitement the ships which brought food and clothing to the miners demanded such prices for their goods that the men were obliged to give a good portion of their wealth for the necessities of life.

Think of paying sixty dollars for a sack of flour, a dollar a pound for dried apples and nearly as much for a pound of sugar. A flannel shirt cost sixteen dollars and rubber boots forty dollars a pair.

But, in spite of high prices and many hardships, a good many poor men have become rich in the Alaska gold fields, though some have been disappointed and some have lost their lives.



KLONDIKE MINERS AT SKAGWAY, ALASKA.

This picture is from a photograph which was taken at Skaguay, on the twelfth of August. Even then, you see, it was cool enough for men to wear warm coats. They encamped here for a few days to get provisions ready for their rough journey inland.

Some of them landed in Skaguay harbor and some of them at Dyea.

These men have climbed to the summit of Chilkoot pass.

Fields of snow and ice lie around them and below them, glittering in that clear air.

But the men are too weary to enjoy the rugged beauty of the scene.

They have had a rough climb, and now they must make a

descent of twelve miles into the valley, with their loads on their backs, a cruel wind almost taking their breath away. The thermometer is probably fifty degrees below zero.



GLACIER, SUMMIT OF CHILKOOT PASS.

The man on the left has a section of a boat strapped to his shoulders.

Imagine a line of human figures climbing up to the summit of Chilkoot. A few of them take the shorter, steep path through the pass.

In the distance one can hardly realize that those five black dots on the mountain side represent men at all.

Most of the party take the longer route, which looks a little easier. Perhaps they will reach their destination first, though they take the longer road.

But it is hard tramping through the snow at best, and there are treacherous stones underneath that make all these mountain paths dangerous.

The first part of the journey up from the coast can be made by boat.



INDIAN CANOES AT DYER.

This picture was taken on Sunday. That is why the boats are idle. They belong to the Chilkoote, most of whom are very religious men. They will not work on Sunday at any price. They hold their services in a tent.

There is a village of one hundred tents or more on the left bank of this river. Some of the little dwellings can be seen in the picture.

Here are two of the faithful helpers of the men. Fine dogs are raised in the interior of Alaska. They have sometimes been sold to the miners for two hundred dollars apiece.

These dogs are ready to draw small packing boxes, but they are often attached to sleds, and will draw one hundred pounds twenty miles or more a day.



DOGS PACKING OVER DYEA TRAIL.

Down at Seattle dogs have been trained for such work and then sent to Alaska, but they cannot endure such hardships as these real Alaskan dogs.

This is a good view of a typical Alaskan camp, with its little shanties down among the fir trees.

The mountains of rocks and ice and snow are partly hidden by the drifting clouds in the picture.

How desolate and bleak it is! One of the dangers to such a camp as this is from the avalanches which sweep down the mountain side. Sometimes, too, there is a breaking up of a glacier, and the tents are washed away.

This camp is called Sheep Camp, from the great numbers of Alaskan sheep which used to live near by on the mountain side.

Gold dust is packed safely in strong boxes and brought down to the famous Assay Office at Seattle.



BALANCES THAT HAVE WEIGHED OVER \$18,000,000 OF GOLD.

When the men first appear at the Assay Office they stand in line with their precious boxes.

The man who takes the gold from them weighs it on scales that are sensitive to one-thousandth part of an ounce.

The miner is given a receipt stating what the weight of his gold dust is, and he is usually told to come back in a day or two for his money.

The dust is placed in a crucible, where the impurities are separated from the gold by melting it.

Then it is poured into a steel mold that it may be formed into a bar.

After it is cool the bar is given a bath in an acid, which removes any foreign substance which clings to it.

Then, after it has been weighed again, a check is written for the man who owns the gold. This is paid to him when he brings the receipt which was first given him.

He takes the check to a bank, and then his gold is finally turned into money for him.



GOLD BARS, VALUE \$886,000, SEATTLE ASSAY OFFICE.

If he prefers, however, to pay for the work that has been done in the weighing and cleansing and melting and molding, he can have his gold bar instead of the money.

The bars are shipped to the United States mints and made into coins.

SEAL FISHERY.

When we think of the riches of Alaska, we remember the seal fisheries as well as the gold mines.

Four-fifths of all the sealskins sold in the whole world come from four small islands off the coast of Alaska.

When these islands were discovered, with their wonderful colonies of seals, people from the mainland went there to work for the Russian Fur Company.

After the United States bought Alaska and the islands, these people worked for the San Francisco Commercial Company.

No one knows just where the seals go when they leave these islands each year. They are seldom met by sailors on the Pacific Ocean. But they come here from somewhere in countless numbers every summer.

The dense fogs which cover these islands during most of the warm weather seem to furnish just the shelter from the sun which the seals need.

The baby seals at first seem to be afraid of the water, but their mothers coax them into it, and they soon learn what fun it is to swim.

The islanders sometimes capture the little seals and tame

them. They can be taught many tricks and are very intelligent little animals.

We speak of seal fisheries, but the seals are not caught at all as we catch fish.

The men get between the seals and the water, when they are lying on the rocks, and drive them inland toward the factory. The seals pull themselves along by their flippers.

They are killed by a blow on the head, and the men who do the work are so skillful that it is said the seal is always killed by one blow, and probably suffers no pain.

The skins or pelts are packed in salt and shipped to London, where they are cured and dyed and made ready for use.

Most people think that no fur is so beautiful as the soft, glossy fur of the Alaska seal.

It seems strange that the slaughter of so many of their number every year should not drive the seals away from these islands, but their fondness for their chosen summer homes seems as great as ever.

They come in such numbers that the shore looks black with them for miles, as they lie on the rocks.

GOLD MINING.

Long ago, in the year 1847, a man in California who was building a saw-mill let a rushing stream of water through his race-course.

This carried away with it a large amount of earth, and there, among the stones washed clean at the bottom of the canal, were found shining particles of gold.

Within two years people from all parts of the world were hurrying across the country to seek for gold in California.

You may have heard of the "forty-niners." Those were the men who went to California in 1849, many of whom became very rich.

Since then much gold has been found in many of the mountain ranges in the western part of our country.

Sometimes it is buried deep in the rocks many feet below the surface, and sometimes it is found among the stones and gravel on the banks of rivers.

The gold found near the surface is called "placer gold," from a Spanish word meaning pleasure. The early California miners first used this word in speaking of gold easily found near the surface.



EXAMINING SAND WITH A GOLD PAN.

A large round pan of sheet iron is the most common utensil used by the placer miner.

He partially fills this with earth that he believes to contain gold. Then he takes it to a creek, holds it level, and sinks it gently under the surface of the water.

Then he raises it out of the stream and rocks it carefully to and fro.

Gold is much heavier than the sand and gravel, and as they spill out over the sides the gold sinks to the bottom of the pan.



WASHING OUT GOLD WITH A CRADLE.

This man is using a cradle instead of a pan.

This is a sort of wooden tray set on a pair of rockers, with a hopper at one end.

You can see the hopper is set above the floor of the box. It

has a sheet-iron bottom perforated with half-inch holes. The sand is shoveled into this and the water is poured in with a hand dipper, while the cradle is being rocked.

The coarser particles of the gravel will not go through the holes and are gathered and thrown away.

The finer sands pass through and run down the floor of the rocker, where the gold sinks to the bottom, as it did in the pan, and the lighter sand is washed out.



SLUICE-BOX MINING.

The sluice-box shows another way of getting the gold from the gravel.

A sluice-box is usually about twelve feet long and three or four feet wide. It is made of wood. Bars, called riffle bars, are fixed to the bottom, a few feet apart.

Many boxes are joined together and are placed at a slight incline.

Earth is shoveled into the head of the sluice, a stream of

water is poured through, the dirt is washed down and the riffle bars hold back the gold. Sometimes rocks take the place of the riffle bars.

There is also hydraulic mining.

Away up in the mountains a stream is dammed. The water is carried down to the place where the miners are working in large iron pipes.



HYDRAULIC MINING.

Then the powerful streams are turned upon the gravel banks. The force of the water is very great.

Great quantities of earth are washed down into the sluices, which catch the gold.

Most of the gold found in placer diggings is in small particles, though sometimes a large nugget is found.

Probably the largest ever found was at Ballarat, Australia. This was worth over forty-six thousand dollars.

Here are some of the workers in a gold mine. The men are drilling in a true fissure gold vein in order to blast out the ore, and the patient donkey is waiting to take his car to the elevator as soon as it is filled.

This miner is getting ready to blast the rock.



DRILLING IN A TRUE FISSURE VEIN.

First he made a hole in the rock, and then fastened in it something that looks a little like a candle.

It isn't a candle that we should care to light in the ordinary way, however, for it is made of dynamite.

After the miner connects a fuse with it, he will pack the

earth tightly in about it. As soon as he lights the fuse, there will be a call to run.

Then, very quickly, there will come a terrific explosion.

Great masses of rock will be torn away. The miners will throw these into holes in the bottom of the tunnel, and they will fall into cars in a tunnel below.

There are different ways of getting the gold from the rocks. That which contains very little gold is sent to the cyanide mill.

We might see no sign of gold in these rocks.

The stones are put through three different mills until they are ground to a soft powder.

This powder is put into a great tank, into which water containing cyanide of potas-

sium is poured. Cyanide is a substance which has an attraction for gold.

The gold in the powder will separate itself from the other substances that formed the rock and is drawn off with the cyanide in the water.

Now, gold is even more fond of zinc than it is of cyanide.



PREPARING THE BLAST.

So when this water is turned into boxes filled with little shavings of zinc, the gold leaves the water and clings to the zinc.

Then the zinc and gold are melted in a furnace in such a way that the pure gold can be poured out in a stream.

Is the gold from which most of our jewelry is made pure gold?

RANCHMEN.

In many parts of the West are great cattle ranches.

These cowboys, having such fine sport together, belong to one of the Montana ranches.

President Roosevelt used to live upon one of these ranches, and he says:

"All of the land between the Rockies and the Dakota wheat-fields might be spoken of as one gigantic, unbroken pasture, where cowboys and branding irons take the place of fences."



COWBOYS.

Many of the cowboys in Montana have come from the southwestern part of the country, but some are eastern young men who like the wild life, for awhile at least, and hope to make their fortunes.

They live in houses made of unhewn logs, chinked in with moss and mud. The roofs are often branches covered with dirt.

There are usually several little cabins grouped together. The cooking is often done in one house and the men sleep in another. The foreman or ranchman has a cabin for his own use, and then there are the sheds and the stables.

The little settlement will probably not be found out on the open plains, but near the wooded bottom of some stream.



DISPUTED BRAND.

All cattle are branded on the hip, shoulder or side, with letters or numbers or figures that show to whom they belong.

These fellows seem to be uncertain who owns this poor steer.

No two ranchmen can use the same mark, however, and there is a register

which will show who the true owner is.

The horses are an important part of the ranchman's property.

President Roosevelt tells us what wonderful riders the men are who break the wild horses. He says:

"The horse-breakers, always called 'bronco-busters,' can perform really marvelous feats, riding with ease the most vicious and unbroken beasts.

"Although sitting seemingly so loose in the saddle, such a rider cannot be jarred out of it by the wildest plunger, it

being a favorite feat to sit out the antics of a bucking horse with silver half dollars under each knee or in the stirrups under each foot."

It is a hearty, free life that the cowboys lead in the open



BRONCO BUSTERS.

air. Sometimes men from cities who are tired out with their work go to live on a ranch.

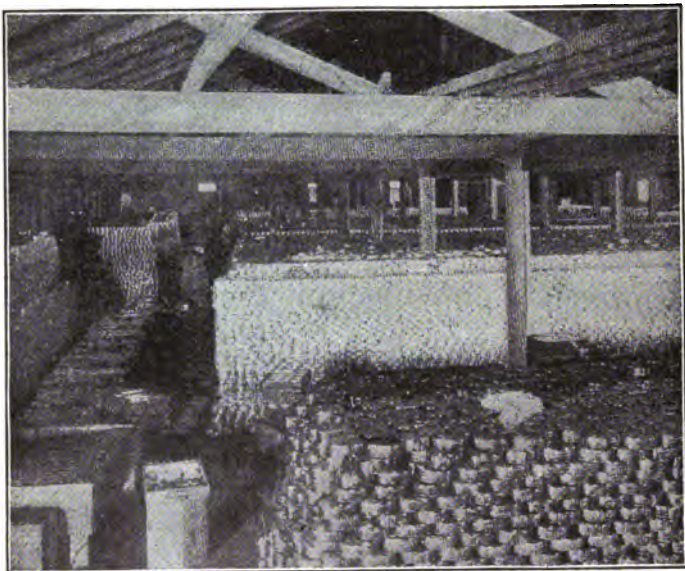
If they do not gain wealth, they usually find health, which is better still.

SALMON FISHING IN THE NORTHWEST.

Did you ever see such a stock of tin cans as are shown here?

I am very sure you never did.

You may have tasted the salmon from some one of these



BRITANNIA CANNERY, 1,500,000 CANS PACKED IN 1895.

very cans, however, for most of our salmon comes from the great canning factories on the banks of the Columbia and the Frazer rivers.

Some of the finest salmon in the world are caught in these rivers.

The Columbia River salmon fisherman will tell you that there is no fish to equal his royal chinook. And truly it is a king of fishes, sometimes weighing as much as seventy-five pounds.

It is a fine sight to see the fishing-boats start out, and finer still to see the beautiful, gleaming fish that are caught by thousands.

It is only for three months of the year that it is lawful to catch the salmon.

The finest fish of all are not sent to the canneries, but go to the cold storage plants.

There they are thoroughly cleaned, salted and packed in large wooden casks holding five hundred pounds.

Then they are placed in refrigerator cars where they are kept at the freezing point until they are delivered, sound and sweet, in the markets across the continent.

At the canneries the work is very neatly done, and great care is taken that the cans shall be quite safely sealed, so that the fish will be in good condition if the cans are not opened for many months.

The choicest parts of the fish are usually packed in cans of an oval shape. You will find that you will have to pay a little more for these at the stores than for the tall or flat round cans.

The canning is done in the summer, and the labels are usually pasted on the cans by school girls, who like to earn money in their vacation time.

A little girl sometimes earns a dollar a day at this work.

In one large cannery nearly two million cans were packed last year.

YELLOWSTONE PARK.

You know that nearly every city and town in the country has its parks. Did you know that we have a National Park—one that belongs to the whole United States?

It is called The Yellowstone Park, and it is up in the north-western corner of Wyoming.

It ought to be a large park, of course, to belong to the whole country, and so it is—almost as large as the State of Connecticut.

The United States doesn't need to carry curious and beautiful things to its park, as is sometimes done in cities, for



CLEOPATRA TERRACE.

some of the most wonderful things in the world are there already.

The most curious and interesting sights are the geysers and hot springs. There are more than a thousand of them in the park.

Five hundred springs throw up mud and hot water all the time.

The geysers are springs which throw great volumes of boiling water and steam into the air from time to time. Some of them spout every few minutes, and some only once in many months.

The water and the mud build up strange forms about the springs.



GRAND GEYSER.

One has formed a white hill in terraces which is more than two hundred feet high.

The boiling water flows out at the top, and as it flows down from terrace to terrace it leaves a sediment which paints the sides in brilliant colors.

As the water flows from basin to basin it cools, so that a bather could find almost any temperature of water in different basins.

Some of the geysers make a great noise as they throw out their streams of water and steam.

Most of them have names. One of them is called Old Faithful, because it has an eruption with perfect regularity every sixty-five minutes.

The Grand Geyser, the highest in the world, throws its fountain three hundred feet into the air.

Trout are abundant in the Yellowstone Lake.

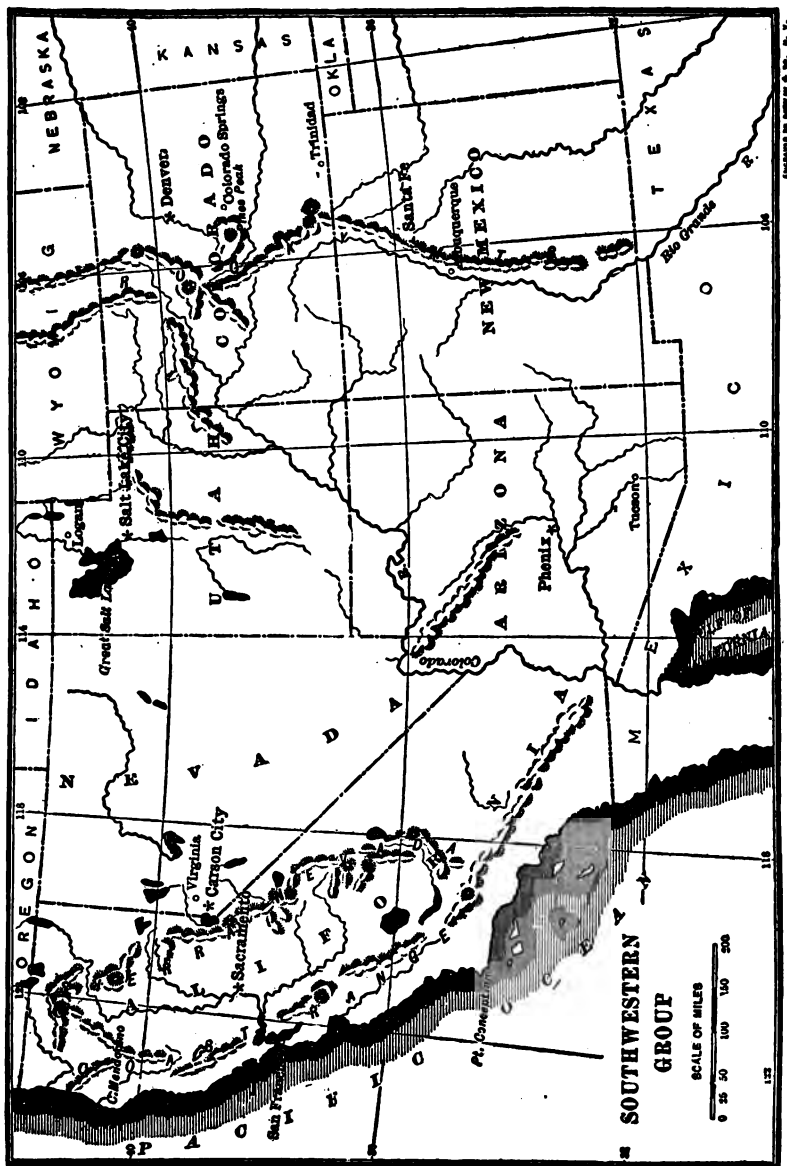
One of the hot springs is so near the lake that it is said one can catch a trout, as he stands on the bank, and, by throwing his line over his shoulder, can land his fish in the spring and cook it, without moving from his place.

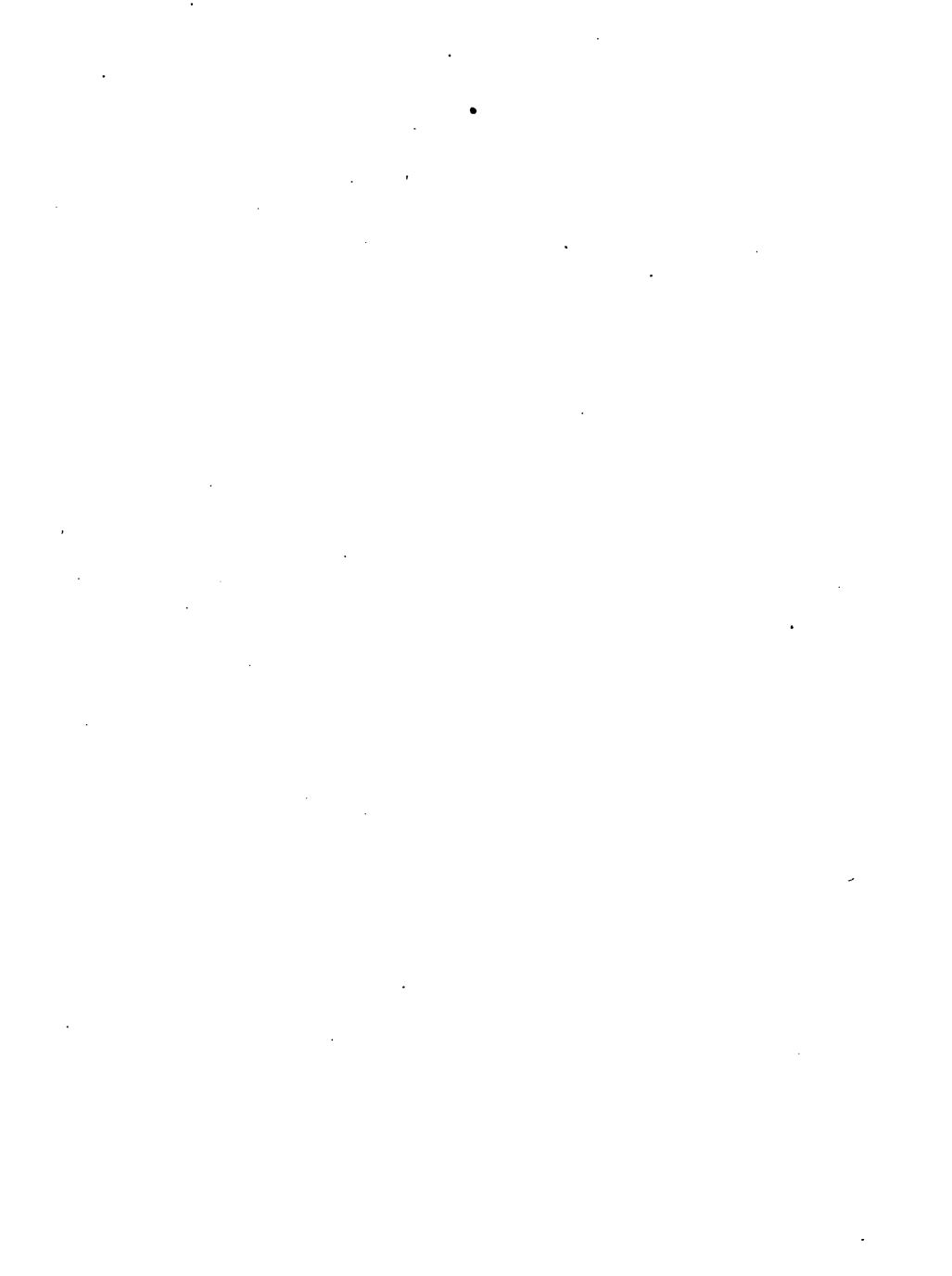
When the Yellowstone River leaves the lake, it flows peacefully for many miles until it reaches the mountains, and then it tears and plunges through the rocks.

It has worn a deep cañon, as many other rivers have.

The rocks that form the walls of this gorge are of such brilliant colors that they appear to be formed of precious stones.

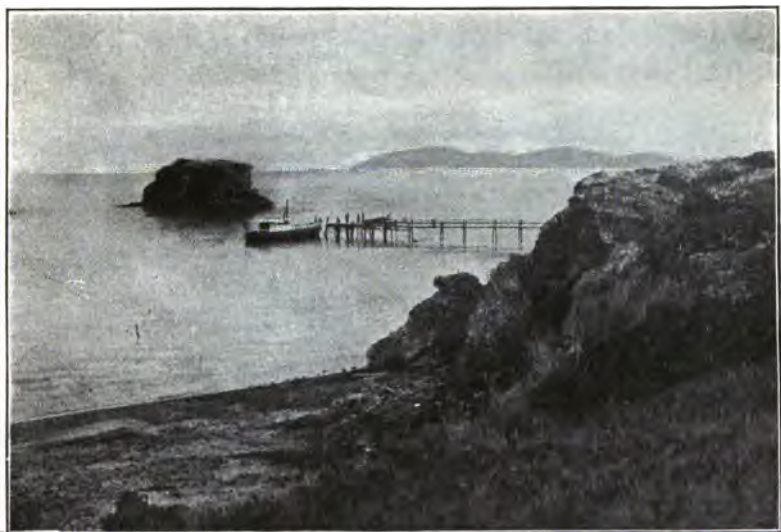
No other country has such a wonderful National Park.





GREAT SALT LAKE.

Here is one of the nicest places in the world for a bath. Think of the fun of bathing in water where you couldn't possibly sink!



GREAT SALT LAKE.

The water of the Great Salt Lake in Utah is six times as salt as the ocean, and the salt makes the water so heavy that a human body can float on it just as cork floats on ordinary water.

What pranks the bathers play in it!

Sometimes they hold sun umbrellas over their heads and

float, while they read a book, as if they were lying on a couch.

Sometimes they double their knees under them and rest their chins on their hands and float like cherubs on a cloud.

No fish can live in such salt water, though there are fine trout in the fresh water streams that flow into the lake.

Thousands of tons of salt are made by evaporation along the shores. It is said that there is much soda in the water and that, sometimes in a storm, tons of soda are washed up on the beach.



MORMON TEMPLE, SALT LAKE CITY.

This great building is the Mormon Temple in Salt Lake City. It is one of the finest churches in the United States. It took almost forty years to build it.

The Mormons use this great temple only on special occasions.

Just at the left of the temple you can see part of the round roof of the building in which the Mormons worship every Sunday.

This is called the Tabernacle. It is made of iron, glass and stone, and the great roof is of copper.

It will hold nine thousand people. How many people can be seated in the largest church in your town?

The Mormon people went to the Salt Lake valley many years ago. They found it a dry, barren country, but they have turned the streams of water over the land, and now there are fine farms everywhere.

Irrigation companies spend a great deal of money to carry the water in canals through the barren land. This land now produces the most luxuriant vegetation.

As many as eight thousand large heads of cabbage are grown to an acre.

The melons grown on these irrigated lands are unusually rich in flavor, and thousands of crates are shipped every season to all the Eastern cities.

A very curious and immense boulder, resembling the head of a giant, called The Sphinx, rests on a high mound overlooking one of these fertile valleys at Echo Cañon, Utah.

INDIANS.

Did you ever see an Indian baby?

If he belongs to the Chippewa tribe of Indians, he hasn't any name, and he won't have until he is old enough to name himself.

When he is about twelve years old, some morning his mother will place a bowl of charcoal before him instead of his breakfast.

That means that he is to go off by himself and go to sleep. If he dreams of some animal, the name of it will be part of his name. Perhaps he will be called Red Deer or Gray Fox.

I don't know what would happen if he shouldn't dream of an animal.

Perhaps little Indian boys think so much of hunting that they are pretty sure to dream of game.

When he becomes a brave warrior he will put on a fine dress, with feathers on his head.

These Indians belong to the Cheyenne tribe.

They have come up to the agency to get provisions.

In different parts of the West the United States Government has established these places where the Indians may come to get tools to work with and a certain amount of food and clothing.

Native policemen take care of the agency buildings and give out the flour and sugar and coffee.

Each one of these Indians is allowed to brand a steer as it stands in a pen built for the purpose.

After the branding, the steers are let out of the pen, and then follows a wild chase across the plains, each Indian



BRANDING STEERS.

trying to shoot the steer that he has branded. This is the way they get their fresh beef.

The squaws skin and cut up the animals after they have been killed.

There are a good many different tribes of Indians still left in our country, mostly living in the western states and territories.

When the white men first came to America, the Indians were the only people here. No one knows where they first came from. Perhaps they came across the straits from Asia, on the ice.

As more and more white people came, they gradually



A WILD CHASE.

drove the Indians farther and farther west, until now only a very small part of the country is left for them to call their own.

Perhaps it is not strange that the Indians fought cruel wars with the white people, who had driven them from their own lands.

THE SOUTHERN STATES.

Do you know of what color a sapphire is?

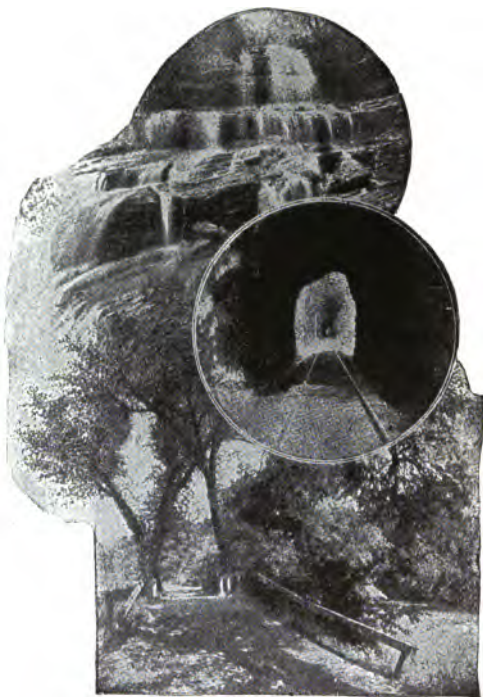
A little gem of a lake is Sapphire Lake. It is up among the mountains of North Carolina. So blue are the lakes, the sky and the distant mountains that this is called the Sapphire Region.

The whole mountain country has been called **The Land of the Sky**. Not every name in the region is so poetic, however.

One lovely town looks out upon peaks called Bushy, Craggy, Hog Back and Bear Wallow.

But the scenery is beautiful, whether the names suggest it or not.

The rugged mountain sides gleam through rosy banks of azalias and laurel. The green forests climb to the summits, the ground is carpeted with ferns, and





THE LAND OF THE SKY.

clear streams tumble over the rocks down into the valleys.

A railway takes one right into the heart of the mountains.

On a broad plateau, where the lovely Swannanoa River joins a larger stream, is the city of Asheville. There is no other city in the eastern part of the United States built so high among the mountains as this.

A little out of the city is the splendid home of Mr. George Vanderbilt, the finest private estate in America. The house itself, which it took five years to build, is as magnificent as Aladdin's palace, and the grounds around it are no less beautiful.

Should you like to have a yard of a hundred thousand acres about your house?

Not all of the homes in this Land of the Sky are like fairy palaces.



NORTH CAROLINA CABIN.

Here is one of the humble ones.

Side by side with the Carolina Mountains lie those of Tennessee.

What river is it that sweeps in such wonderful curves below Lookout Mountain?



RIVER, FROM LOOKOUT MOUNTAIN.

Perhaps you have heard of the battle that was fought above the clouds.

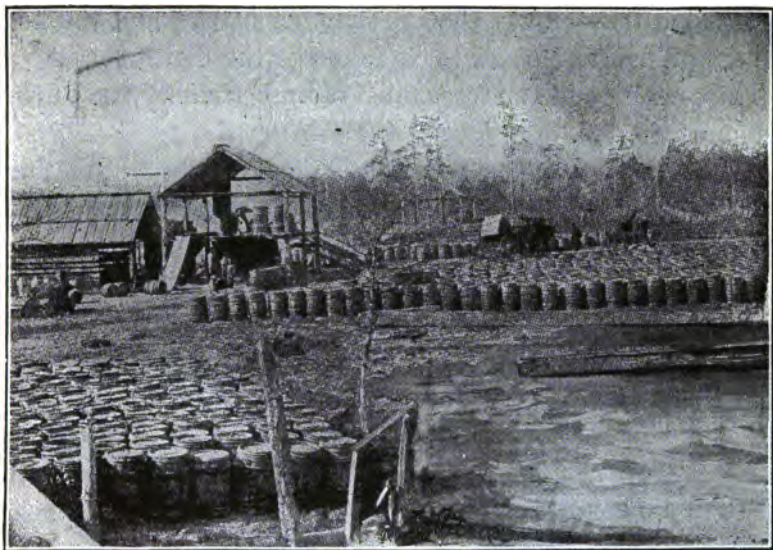
The veterans of the Civil War could tell you about Chattanooga and Lookout Mountain.

TURPENTINE.

What will all the turpentine in these barrels be used for?

Perhaps you have watched painters mix their paint. If you have, you will know one of the principal uses of turpentine.

Nowhere else in the world are seen so many barrels of turpentine as may be seen on the wharves at Savannah at certain times in the year.



TURPENTINE WORKS.

In the southern states one may travel for miles through forests of tall, straight pine trees. In these forests are the turpentine farms.

If you should walk among the trees in these forests, you would see upon every tree one or more places where the bark and wood had been chopped away. A sort of box has been cut at the foot of each scarred place.

In the spring, when the sap begins to rise, it falls down in thick, white drops from the fresh cuts in the tree into these boxes.

Every two or three days men come around to scoop out the sap which has collected. They carry kegs with them

into which they empty the sap from each tree, and the kegs are emptied into barrels to be taken to the distillery.

The openings in the trees must often be freshly cut during the summer.

Each year a new box is cut, a little higher up, until there are scars from the base of the tree upward for three or four feet.

When the sap is collected in the barrels it is thick and gummy. At the distillery the turpentine is separated from the rosin. Only a quarter of the quantity of turpentine will be made from the gummy sap.



TURPENTINE STILL.

Water is mixed with the sap and then it is put into a great kettle, which is set in a brick furnace.

When the gum melts and a vapor begins to rise, it is carried off into cold pipes where it turns to a liquid and

flows out into barrels, in the form of clear, white turpentine.

Have you anywhere seen a vapor condense into a liquid when it struck a cold surface?

The part of the pine tree sap which is left in the kettle after the turpentine is removed becomes very thick. This is also put into barrels, where it soon hardens and becomes rosin, as we see it.

This is made into varnish. It is used in soap-making, also. You have probably seen a violinist wax his bow with it.

Collecting the sap of the pine trees and boiling it makes one think of collecting and boiling the sap of other trees in the forests of the North.

What trees are tapped for sap in the northern states?

COTTON.

Is there anything that is lovelier than the bunches of snowy cotton that cover the cotton plants after the green balls burst open?

If you look closely at this picture you may see some of the balls that have not yet opened.

In June the wide cotton fields planted with the green bushes look like a beautiful garden with red and white roses in bloom. When the cotton is ripe the bushes seem powdered with snow.

The cotton plant needs a warm climate that is not very moist, and that is just the climate found in the states along the South Atlantic and Gulf coasts.



COTTON BLOSSOMS.

The very best cotton in the world grows on the islands which lie off the coast of South Carolina and Georgia. The plants there grow to a great size and the fibers of the cotton are longer than those of any other cotton plants. This is called sea-island cotton.

Most of the people who work in the cotton fields are negroes.

The busiest time is in the late summer and early fall, when the cotton is ready for picking.

The gay turbans of the negro women and girls make bright patches of color in the white cotton fields.



COTTON PICKERS.



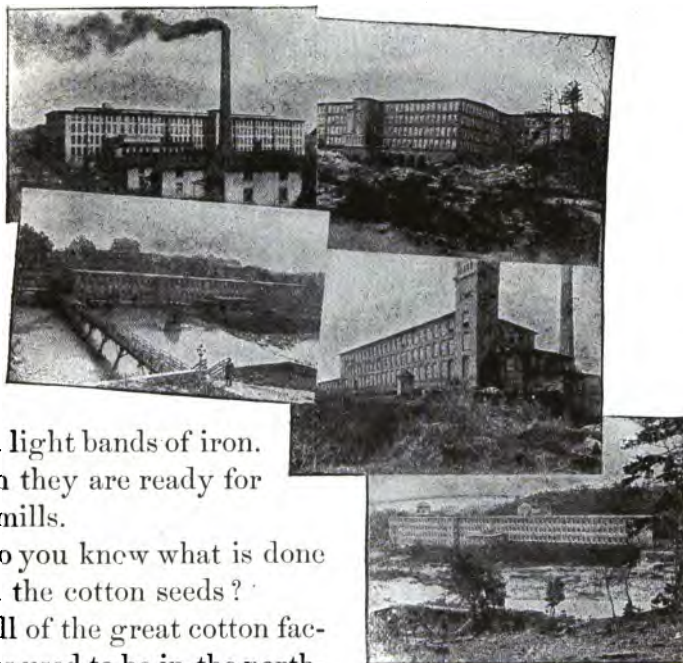
CABIN, COTTON PLANTATION.

If you were to go down among the pickers and pull the cotton from the balls, you would feel little hard bunches between your fingers, hidden in the soft, white fibers. These are the seeds, and they must all be taken out before the cotton can be made into thread and cloth at the mills.

The cotton gin is the wonderful machine that picks out the seeds, and rolls out the

cotton in a beautiful, fluffy, white mass. Did you ever see a bale of cotton?

Machines squeeze the light, fleecy cotton into hard, tight packages. These are covered with coarse cloth and bound



with light bands of iron. Then they are ready for the mills.

Do you know what is done with the cotton seeds?

All of the great cotton factories used to be in the northern cities, but of late years many have been built in the southern states.

It is a wonderful thing to see the cotton from bales, with its loose, soft fibers, turned into strong thread and firm, white cloth.

Pull apart a bit of cotton as it comes from the plant and

COTTON FACTORIES IN THE SOUTH.



SOUTHERN FARMING.

notice how short and how fine the little hair-like fibers are.

After these have been loosened from each other and cleaned, they go through a process called carding.

The carding machine combs out the tangled fibers so that they will almost all lie one way, and they come from the machine in the shape of a soft rope of cotton yarn.

Another machine twists these soft ropes and winds them together into fine, strong threads.

Then they are taken to the weaving rooms, the shuttles fly back and forth, and the busy looms weave hundreds of yards of cloth in a day.



WE THREE.

Is there anything in your schoolroom made from cotton except the clothing that you wear?

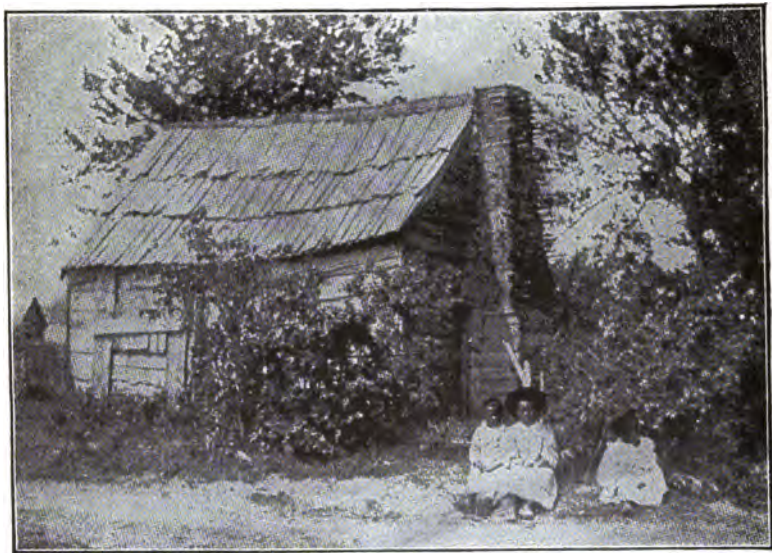
What do you suppose that this little girl's name is?

If she lives in the city of Augusta, very likely that is her name.

There are a great many colored people there, and they are so proud of the city that, it is said, one little colored girl in nearly every family bears that name.

Why are such great numbers of colored people living in southern states?

They like the warm climate, like that in Africa, from which their grandparents first came. Before the Civil War made



A TYPICAL SOUTHERN NEGRO HOME.

them free, they were all slaves of the wealthy white people who lived at the South.

What is the difference between slaves and other servants?

The negroes did all of the work about the beautiful southern houses and out in the fields.

They lived in little cabins on the plantations, as many of them do still. Then they had to stay and work for their masters, and now they are free to go where they wish.

Many of the masters were kind, and their slaves were happy and well cared for, but some of them were very unkind, and their poor slaves were cruelly treated.

The negroes liked to sing their songs together when they were picking cotton on the plantations.

The little white children had the old colored "mammies" for their nurses, and fond and kind mammies they were, too!

How they loved to sit by the chimney corner in their snowy caps and kerchiefs and tell wonderful stories and sing weird songs!



MAMMY.

Perhaps you have read some of the Uncle Remus stories. How wide the eyes of the little white children, gathered at their nurse's side, must have opened at such stories as these, and the little "piccaninnies," as the colored children were called, liked to stand and listen, too, I suspect!

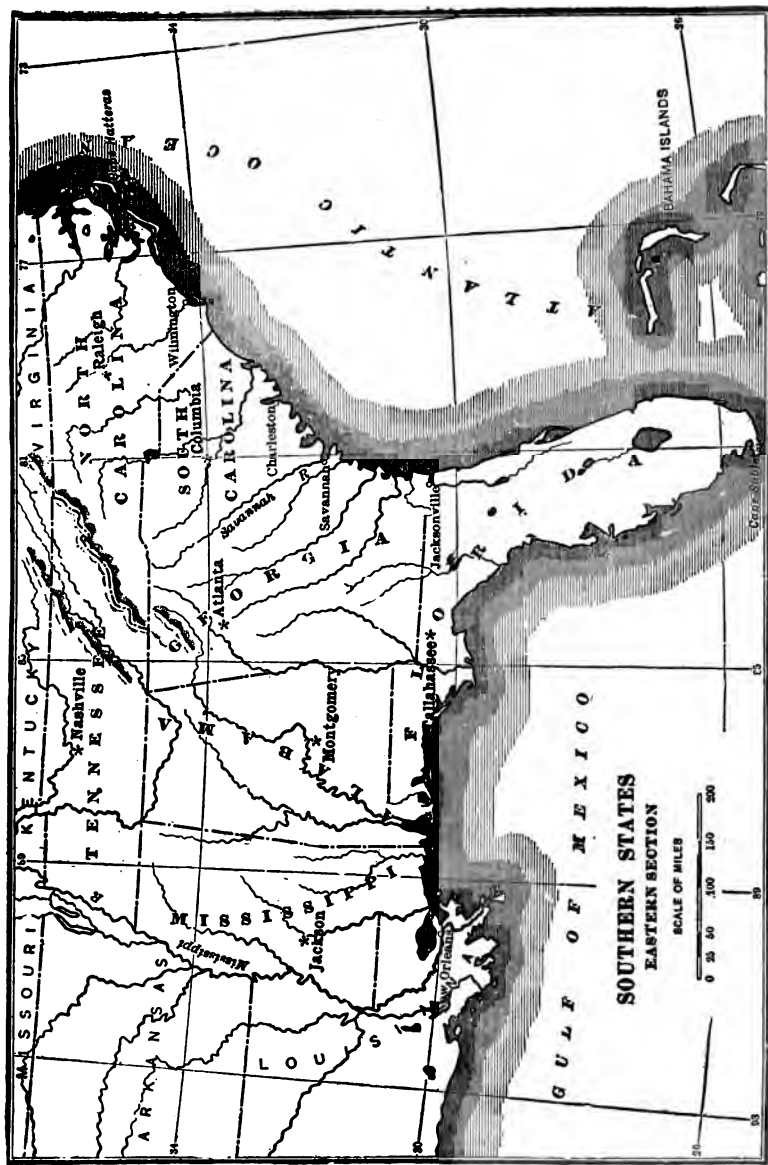


UNCLE REMUS' HOUSE.

Nowadays the colored people at the South are being educated, and are learning how to take care of themselves and to become good citizens.

Good men have worked hard to plant the colleges for the negroes and the poor white people.

Do you know the names of some of these schools?



FLORIDA.

Not all of the people who first came to North America were Englishmen, you know.

The old city gates at St. Augustine take us back to the early Spanish settlers. These walls, built more than three hundred years ago, formed part of the defenses of the old city—the oldest in the United States.



OLD CITY GATE, ST. AUGUSTINE.

The Spanish fort, with its parapets, bastions and towers, is still standing, also. Here there are dungeons and secret passages, torture racks and remains of iron crosses and cages, that tell of cruel treatment of prisoners at the hands of those fierce old Spaniards.

There are beautiful hotels at St. Augustine now, surrounded by gardens as lovely as fairyland; and in the mild

southern winters these are filled with guests from all parts of the world.

A strong sea wall has been built by the United States Government. It extends along the bay front of the city. What a charming promenade that must be on a bright winter afternoon!

These are fish which were caught in the St. John's River.

They are called tarpon, and are the largest fish that can be caught with a hook. It



TARPON.

takes a strong line to hold a fish that weighs over a hundred pounds.

The river is so wide at Jacksonville that it seems almost like a lake. Farther inland it grows narrower. Then come the forests of palmetto trees, live-oaks and cypresses, from which hangs the silvery Spanish moss.

This is a curious sort of air-plant which festoons from the limbs like soft, gray fringe.

Among the trees flutter birds of gay plumage, and the river's edge is bright with wild poppies and azaleas.

Bananas, cocoanuts and pineapples grow in the southern part of the state, while the great orange groves are farther north. In all the inland rivers alligators are numerous.

Over on the eastern coast are Palm Beach and other famous watering places with their fine hotels.

Sometimes the old owners of the land, the Seminole Indians, appear with alligator hides or bird skins to sell.



ALLIGATOR.

They are a law-abiding tribe, and friendly to the white men who live near their old hunting grounds in the everglades.

They are quaint figures in their gaily colored shirts—they sometimes wear two or three at a time, if they wish to appear particularly well dressed—their heavy vests, with no shoes and perhaps no trousers. On their heads they often wear turbans made of blankets folded and wrapped round and round.

The money which they get for the hides and skins will probably be spent for fancy belts and bright kerchiefs, for they seem to be much interested in their costumes.

THE NEW ENGLAND COAST.

Manan is an Indian word meaning island. Grand Manan, the great or grand island of the Indians, is just east of the coast of Maine.

Look on the map and find the bay at whose entrance it stands.

Can you tell anything about the tides there?

How they sweep past the rocky bluffs of Grand Manan!

The cliffs are on all sides of the island except the eastern.

The people who live here are fishermen, and bold, sea-faring people.

When lives are in danger on the coast strong, willing hands man the life-boat and hasten to the rescue.

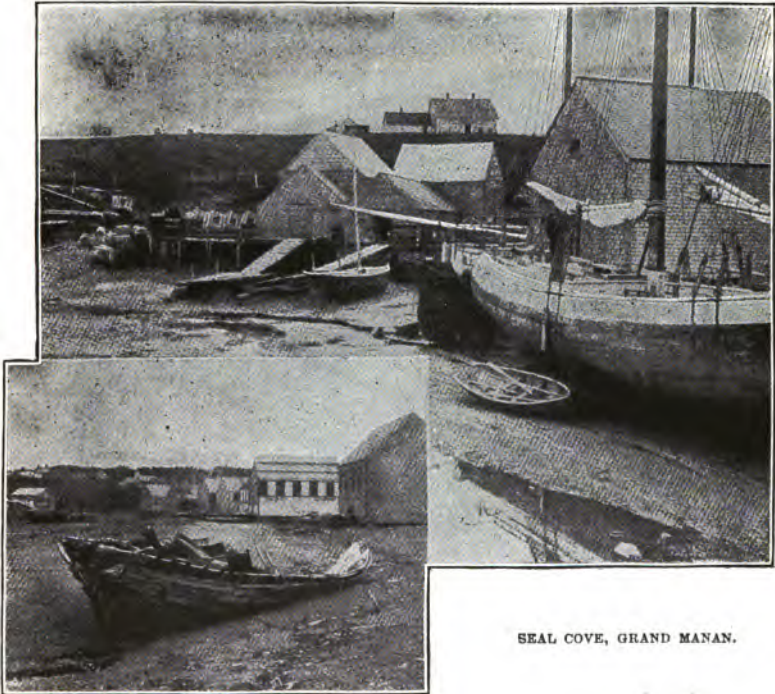
The daughters are as brave as the young men.



MANNING THE LIFE-BOAT.

Great quantities of cod, haddock, hake and herring are caught, cured, packed and shipped to all parts of the world from the island of Grand Manan each year.

The women help in getting the fish ready for market.



SEAL COVE, GRAND MANAN.

Over on the rough west side live a few of the descendants of the old owners of the island, the Passamaquoddy Indians. They catch porpoises for a living. What do they get from the porpoises to sell? How stern the cliffs look that edge the shore!

Yet seen from a little distance off on the water they are very beautiful. They shine brightly in the sun, and the shadows look blue and purple.

Great numbers of sea-birds have always inhabited this



SOUTHERN HEAD, GRAND MANAN.

lonely coast. Gulls, penguins and eider ducks flit about the cliffs, and high overhead a golden eagle may sometimes be seen.

To what country does the island of Grand Manan belong?

If you were staying in the old town of Gloucester, on the Massachusetts coast, early in February, you might see the first fleet of fishing schooners start out for the Grand Banks.

What do we mean by the Banks?



GLOUCESTER HARBOR.

You know what a bank is on land. Well, a bank in the water is the same thing. It is land higher than the land around it.

We judge of the height of the land at the bottom of the ocean by the depth of the water over it.

All around the Grand Banks the water is ten thousand feet deep or more. The water over the Banks varies from fifty to three hundred feet in depth. So you see that the Banks are very high indeed.

They are about six hundred miles in length and two hundred miles wide.

Can you tell what other name they have besides the Grand Banks, and where they are situated?



COD FISHING.

Early in the season most of the fishing is for cod.

A little later the Gloucester fishermen go farther south for mackerel. A good many halibut are caught also.



LOWERING THE DORY.

Some of the cod are caught by hook and line, but most of them nowadays are caught by trawls.

A trawl is a line several hundred feet in length, with short lines and baited hooks extending from it. There are from six hundred to two thousand hooks on a trawl.

Two men in a dory take a baited trawl, and starting out from the schooner, anchor and buoy it in a straight line a little distance away.

Do you know why one seldom sees an old fisherman in Gloucester?

It is because so many lives are lost in this dangerous business. Very few of the fishermen live to grow old.

The dories are frail and cannot withstand a very rough sea, but the greatest danger is from fogs.



"DINNER."

An impenetrable fog may suddenly shut down when the dories are away from the schooner, and it may not lift for days.

There is danger then that the fishermen may never find their way back.

It is also possible that the little boats may be run into by the larger craft, or even by the great Atlantic steamers, whose pathway across the ocean lies directly through the grounds of the fishing fleet.

It must seem snug and cosy enough in the cabin of the little schooner when the trawlers are all safely in after being out in the rough sea or in a fog.

These rough men have kind hearts, and their hard lives make them good friends.

Part of the money that is earned on every voyage is set aside for the widows and orphans of the Gloucester fishermen.

In a book entitled "Fisherman's Luck," which Dr. Van Dyke has written, you may find a Slumber Song for the fisherman's child.

The mother, rocking her baby to sleep, calls him her little boatie, and she sings :



FORECASTLE MESS.

“Far away, my little boatie,
Roaring waves are white with foam;
Ships are striving, onward driving,
Day and night they roam.
Father’s at the deep-sea trawling,
In the darkness, rowing, hauling,
While the hungry winds are calling—
God protect him, little boatie,
Bring him safely home.”

This is but part of the poem. You would like to read the rest.

The fish used to be shipped from Gloucester directly to



LANDING HALIBUT, T WHARF, BOSTON.

the West Indies and to Europe, but now they are usually sent to Boston harbor and shipped from there.

Can you tell some of the other exports that go out from Boston and where they are sent?

What do ships coming into Boston from foreign ports bring for us to use?



SOUTH SIDE T WHARF, BOSTON.

What a busy scene it is upon the wharves when the vessels are being loaded !

The men in the picture on the next page are not fishermen. They are men who are studying the plants and animals that live at the bottom of the sea.

Many curious things find their way to the deck of the steamer, brought up from the ocean depths in the great dredge.

The sunlight penetrates only a few hundred feet through the water. Below that, all is darkness. Phosphorescent light shines from the bodies of many of the deep-sea fish.

Some of them have a bulb of light projecting from the head. This serves as a little lantern.

Did you ever see a bit of phosphorus shine in the dark?
Would you like to see some of the finest private yachts in the world?

The Eastern Yacht Club has its club house at Marblehead



HOISTING THE DEEP-SEA DREDGE ON THE CHALLENGER.

Neck. From there, on almost any summer day, may be seen some of the largest yachts, lying at anchor or drifting about in a light breeze.

How much would one of these fine yachts probably cost?

Long ago very different boats were to be seen in the harbor.



MARBLEHEAD NECK.

Marblehead was once a famous fishing port. Her boats were used often to carry their cargoes to Spain and come back loaded with precious things to sell in this country.

What do you suppose they brought home?

The old wharves are not much in use now.

Of all the ships that have come through the channel into Marblehead, probably the most famous was the old Constitution.

You may find in a history how she was chased by British frigates in the year 1814.

The people crowded on the house-tops one Sunday morning to see her come bravely in, while the guns of Fort Sewell kept the British men-of-war at bay!

In most old fishing towns you will notice little platforms built on the roofs of many of the houses, from which the ships could be seen long before they reached the harbor.

What is more beautiful than a yacht under full sail?

In the first season that the *Gloriana* was tried she won eight races, with boats built both in this country and across the ocean.

She was built in the Herreshoff shops at Bristol, Rhode Island.

The Herreshoff Brothers have built many of our fastest yachts—the national cup-defenders.

Who has the cup now?

What is the name of the newest Herreshoff yacht?



HERRESHOFF SHOPS.

What slow and dangerous work it must be to build a lighthouse on a rock which is usually below the level of the low tide!

It is upon such a rock that Minot's Ledge lighthouse is built.

The Cohasset Rocks, of which Minot's Ledge is a part, line the Massachusetts coast off Cohasset for four or five miles.

It takes a sailor who knows every inch of the way to steer a boat successfully in these dangerous waters.

In a storm, the whole surface of the ocean for two miles out from shore is a wild, tossing sheet of foam.

A good many years ago the first lighthouse was built on the ledge.

It was made of wrought iron rods and was thought to be



MINOT'S LEDGE LIGHTHOUSE.

very strong, but it withstood the wild storms for only two or three years.

The present tower is built of stones, each one of which is bolted to the layer of stones below by bolts of gun metal.

Why was gun metal used instead of iron?

The work had to be done very slowly. There were only a few days in a month when the tide was low enough for the men to work at the foundations.

Away out at the end of Cape Cod lies Provincetown.

Why do you sup-



ALONG THE WHARVES, PROVINCETOWN.

pose this name was given to the Cape?

That is not a very hard conundrum for any one, is it?

The harbor of Provincetown is quite land-locked except at the narrow entrance. It has a channel broad and deep enough for large ships.

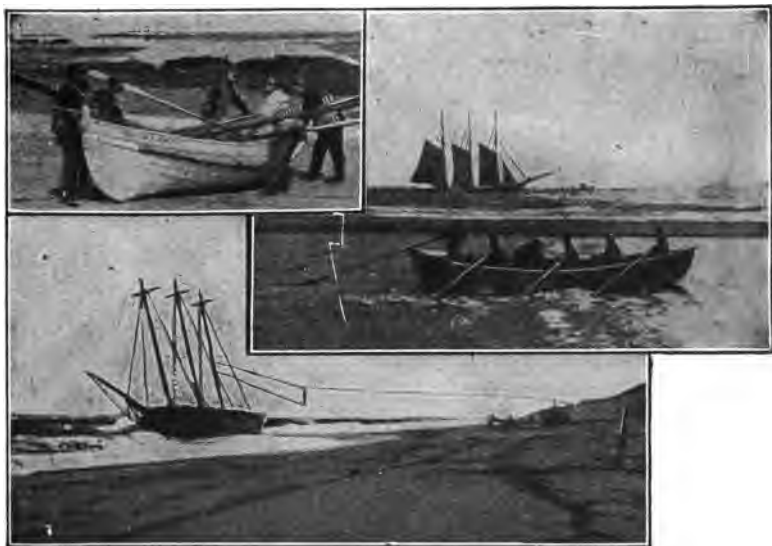
Where did the Mayflower first drop anchor before the Pilgrims landed at Plymouth?

Long ago Provincetown was a famous whaling port, and many men were engaged in fishing.

But the dilapidated wharves show that the whaling business has declined.

There are plenty of fishermen there still, however, and the long tables upon which the codfish are spread to dry in the sun show that they have many a good catch.

Life-saving stations are placed at intervals along the shore. They are connected with one another and with the town by telephone, so that, when a vessel is sighted in distress, word may quickly be sent for help.



LIFE SAVERS AT WORK.

Think what a hard life the men at the life-saving station must lead!

Not only must they brave great dangers when they go

out to ships in the storm, but night after night in roughest weather they must patrol the beach up and down, always keeping a sharp lookout for any signal of distress that may be flying.

When the wind blows strongly across the Cape the air is so filled with the fine sand that it almost blinds one to face it.

Often when the patrolmen come back to the station they have to sweep away the sand from the door of the house as if it were a snowdrift.

Who owns the life-saving stations and pays the men for their work?

Though whalers used to go out from Provincetown and other ports, New Bedford was the center of the whaling industry in New England.

Why was it that the whaling business was such a profitable one?

What did the whale furnish that was much needed?

Why is it not as valuable to-day as it was formerly?

Whaling ships still go out from New Bedford, but not in great numbers. Whales have become scarce and shy, and the whaling vessels have to go much farther north than formerly.

While the whale oil is not as valuable as it once was, there is a constant demand for whalebone.



A NEW BEDFORD WHARF.

Spermaceti comes from the whale, and the teeth furnish valuable ivory.

Did you know that what we call whalebone is really no part of the whale's bones?

Though the whale has an immense mouth, his throat or food-pipe is small. He would soon get into trouble if he should try to swallow a large amount of food. .

Whalebone is a substance which hangs in perpendicular rows from the roof of the mouth of the Greenland whale.

This is a sort of strainer for the food as it comes into the whale's mouth. It strains off the water which the whale takes in with a mouthful of little fishes.



MODERN WHALING SCHOONER.



A WHALING MISHAP.

The water is thrown out through the blow-holes, and the fishes pass into the stomach.

What is whalebone used for?

Have you anything at home made from spermaceti?

Whaling was formerly a very dangerous business. The whaling vessels

were not properly built to withstand the rough weather and the ice which they might encounter.

But boats are now built which are much safer, and they are beautiful and swift as well.

Cottage City must be an unusual kind of a city.

It is on the island of Martha's Vineyard. You can find that on the map.

A great Methodist camp-meeting has been held there each summer for many years.

The big tabernacle, where the services are held, is built in the center of circular grounds laid out with trees, shrubbery and concrete walks. These walks and grounds are kept as neat as a park.

Thousands of people who came yearly to the camp-meeting used to live in tents placed about the grounds.

But nowadays tents are seldom seen. The people come to stay all summer and have built hundreds of pretty cottages along the curving walks.

Some of the houses called cottages are large and elegant summer homes.

Hundreds of other people besides those who attend the camp-meeting now go to Martha's Vineyard every year.

What good times they have!

There are bathing and boating and parks for the children, with croquet and tennis courts.

What fine sport it is to go fishing!

What kind of fish are most plentiful in the water off Martha's Vineyard?

Vineyard Haven is another old settlement on the island.

Vineyard Haven bay has a fine anchorage for vessels, and here, as at Marblehead, may be seen the finest yachts on the Atlantic coast.

It is said that more vessels pass through Vineyard Sound than through any other channel in the whole world, except the Straits of Dover.



VINEYARD HAVEN.

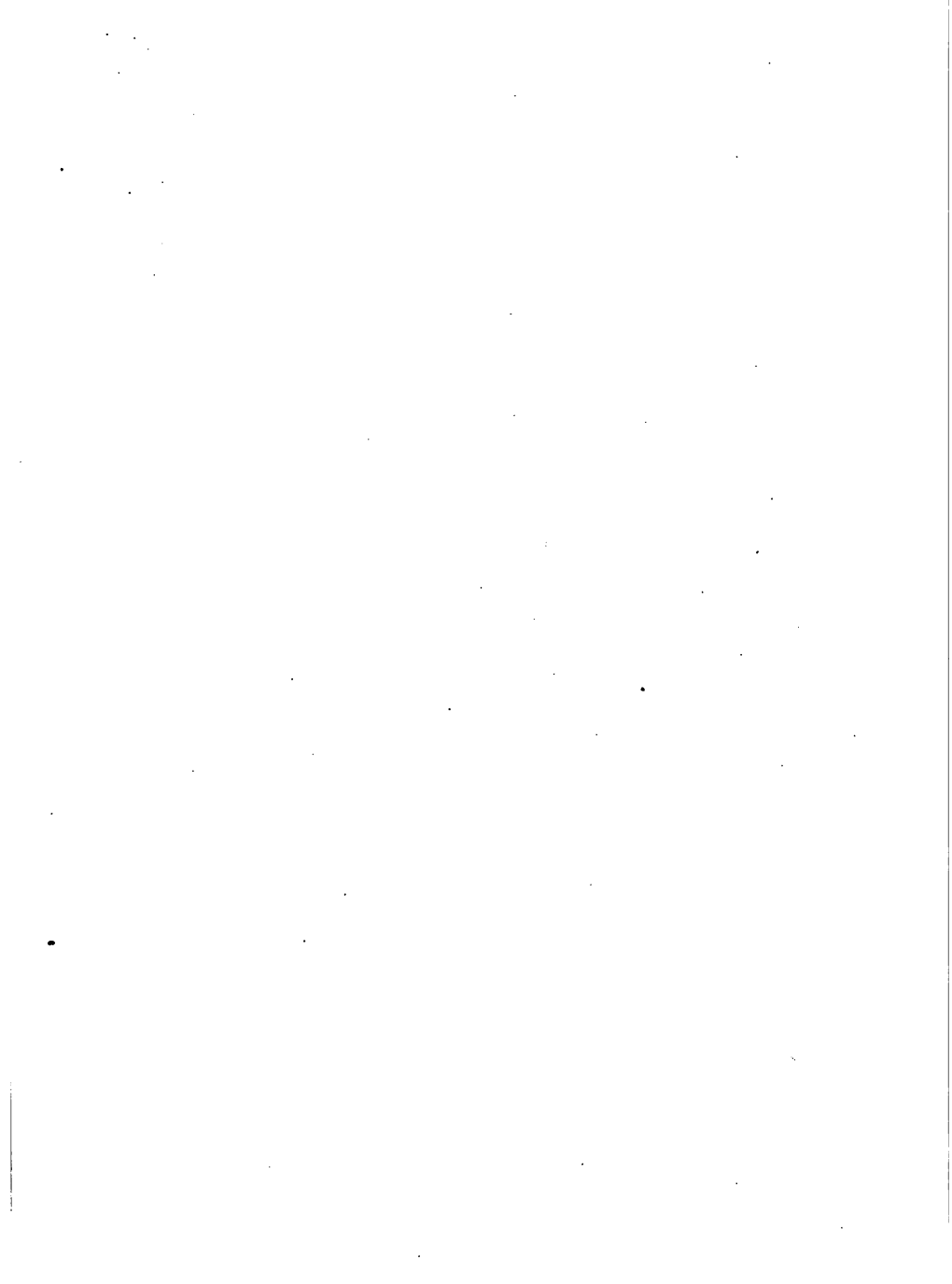
Where are all of these boats going, and why do they go through Vineyard Sound?

If you go to Martha's Vineyard you will be sure to visit Gay Head.

You will be apt, too, to bring home a bit of pottery made from the clay that forms the cliffs.

How bright the colors of the clay are—blue and red and brown!

If you wander across the fields inland, you will be surprised at the unusual number of plants and flowers to be found there.



What is the wide stretch of water beyond the harbor?

What is that long strip of land to be seen on the horizon?

Perhaps some of the boys who read this book will some day go to college in New Haven.



MT. WASHINGTON RAILWAY, FROM BASE STATION.

NEW ENGLAND—THE WHITE MOUNTAINS.

In the Presidential Range, in the White Mountains, the highest peak is named Mt. Washington.

How blue and high Mt. Washington looks as one sees it from the street in the village of Bethlehem in the White Mountains! From that distance one can just catch a glimpse, on a clear day, of the white walls of the hotel on the summit,

and see the line through the forests where the railroad climbs the mountain side.

There are other mountain peaks where railroads run up the steep sides, but this road up Mt. Washington seems the most interesting, because it was the first.

It was a great engineering feat to plan and build a railroad up this mountain that would be perfectly safe. But no serious accident has ever happened on the Mt. Washington railway.

There is a cog-rail between the ordinary rails of the track. The cog-rail looks a little like a tiny ladder securely fastened to the ties.

The engine has a cog-wheel between those which run on the



JACOB'S LADDER, MT. WASHINGTON, WHITE MOUNTAINS.

outer rails. The cogs fit into the spaces in the cog-rail, and, pushed on by steam, they pull the train up the mountain.

What a funny little hump-back engine it is that pushes the car ahead of it!

Sometimes, when tourists reach the summit of the mountain, they find themselves in a cloud, but when it is clear,



TIP-TOP HOUSE, MT. WASHINGTON.

there is a glorious view of other mountain peaks, which look like great billows below, of vast forests off to the north, of rivers and lakes and valleys!

One feels very grateful to the little engine which has pushed one up to this wonderful height.

The next picture looks like a group of tiny houses nestled down among the great hills.

Really it is a large and beautiful hotel, with other buildings that belong to it. It is the Profile House, at the entrance to the Franconia Notch.



FRANCONIA NOTCH.

The mountain at the right, in the picture, is Cannon Mountain. If you were to ride along the shore of Echo Lake toward the hotel, way up toward the top of this mountain, you would see a curious shaft of stone that looks just like a real cannon. This gave the mountain its name.

Farther along, beyond the hotel and within the lovely Franconia Notch, between the mountains, is another lake called Profile Lake.

There is a story that many years ago, an Indian, stopping to drink at the lake, was astonished to see the reflection of a gigantic face in the water.

Looking toward the mountain, far up above him, he saw the great profile of a man standing out from the cliff!

The huge, stern face of stone had been there for ages, but it is thought that no one had seen it before, in that mountain wilderness.

Sometimes, when a dark cloud overshadows it, as one sees it outlined against the sky, it looks very severe, but when the sun is shining and the sky is blue it seems to have a kinder expression.



OLD MAN OF THE MT. FRANCONIA NOTCH, N. H.

Thousands of tourists now visit the place every year. When you go to the White Mountains the stone face is one of the things that you will be most interested to see.

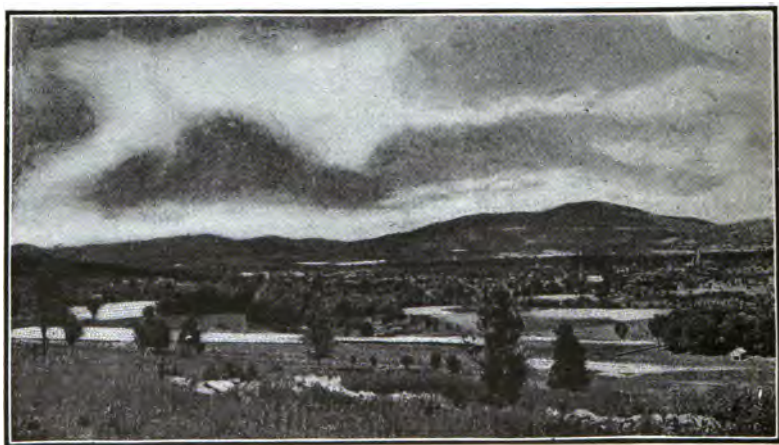
It is only at one point that the rocks assume this appearance of a face. Seen from in front of the bluff, it is only a huge mass of stones piled up against the mountain.

While you have this picture of the Profile to look at, it is a good time to read Nathaniel Hawthorne's story of "The Great Stone Face."

THE GREEN MOUNTAINS.

No better name than the Green Mountains could have been chosen for the mountains that extend throughout the state of Vermont.

They are not grand and rugged, like the White Mountains, but are covered with green forests to their very tops.



RUTLAND AND THE GREEN MOUNTAINS.

Rutland is a pleasant city, with hills rising all about it. Have you heard of the Rutland marble quarries? The largest single marble quarry in the world is near the city, and there are many others almost as large.

The apparent height of the men on the floor of the quarry in this picture gives one a little idea of its size.

Notice how the marble has been cut layer by layer.

See the great rough block that is being raised from the bottom of the quarry.

Before that will be ready for building purposes it will have to be cut into some regular shape.



MARBLE QUARRY.

Sawing marble is slow work, even for the big machines by which it is done.

The iron frame in which the saws are placed is called a gang. Many different saws can be fastened to a gang at one time.

The saw gangs are kept constantly running day and night at the Rutland quarries, and busy workers they

are, dealing a hundred strokes to the marble blocks every minute.

Sand and water are kept constantly upon the marble blocks, and the constant friction of the saws gradually wears down through the marble.

These saws have no teeth, but are bands of iron about an eighth of an inch in thickness. The saws can cut only an inch or two down into the marble in an hour.



SAWING MARBLE.

The Vermont marble is carried all over the world. Are there any buildings in your town which are made of it?

The next picture does not represent a marble quarry. It shows a section of one of the famous brown stone quarries at Portland, Connecticut.

Long ago, all of the great blocks of stone had to be dragged to the top of the quarry, up a steep incline by oxen.

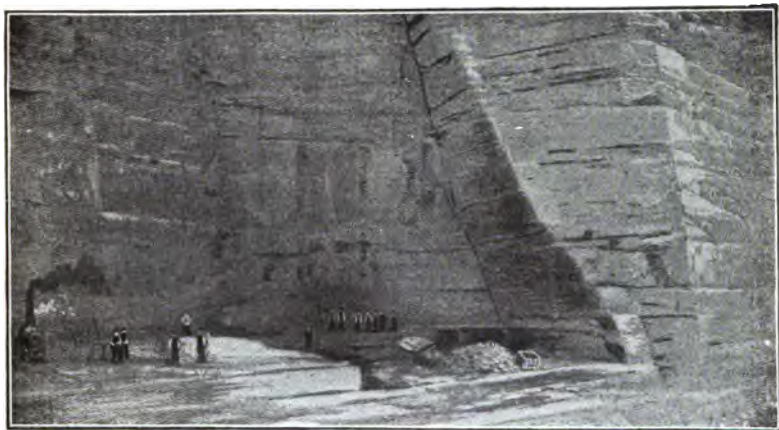
What slow work it was! Now steam derricks and cranes

lift a block weighing fifteen or twenty tons to the surface in one minute.

These quarries are near the Connecticut River, where the companies which own them have a fleet of sailing vessels and barges.

The stone is carried in these vessels down the river, through Long Island Sound to New York, Philadelphia and other seaport towns.

There are houses in San Francisco built of the Portland brown stone which was carried around Cape Horn.



BROWN STONE QUARRY.



A DOUBLE DRAIN.

SUGAR MAKING.

For the Vermont boy the maple sugar season is about the merriest time in all the year.

Up on the slope of the Green Mountains his father very likely has a grove of sugar-maple trees, covering perhaps many acres of land.

There is the sugar-house where the sap is to be boiled, and if the grove is several miles from the farm, this house is



YOKE AND PAILS FOR COLLECTING SAP.

large enough to serve as a camp, for the men who make the sugar may stay here several weeks.

What fun it is for the boys to sleep at night on a bed of soft hemlock boughs with a bag of hay for a pillow! And how hungry they are. The potatoes are roasted in the ashes of the roaring open fire, and the ham is broiled upon a crotched stick over the blaze!

In making maple sugar the trees are first tapped, that is,



A VETERAN TEAM DOES THE QUICKEST WORK.

bored into about an inch and a half, at a height of about three or four feet above the ground. A spout is then driven into the tree, and a bucket is hung below the spout.

The boys carry pails in which to collect the sap from the

trees near the house, but that from the trees farther away in the woods is poured into big tubs, drawn on a sled by a stout pair of horses.

When the sap is first collected it is clear and sparkling, and it should be boiled at once or it will grow clouded, and the sugar will be dark and lacking in delicate flavor.



MAKING MAPLE SUGAR—BOILING SAP.

The sap used to be boiled in an iron kettle hung over the fire. Now it is cooked in a big iron pan set over a large brick arch, under which is the fire. In the largest houses it is boiled in great evaporators.

Most of the sap is boiled until a delicate syrup is formed.

The rest is cooked a longer time and is made into bricks or cakes of rich brown maple sugar.

Can you imagine a ton of maple sugar?

A good many thousand tons are made in Vermont every spring.

A CHEESE FACTORY.

This picture was taken not many miles from the city of Rutland.

The slopes of the Green Mountains are not very good farming land, but there are fine pastures for large herds of cows.

By five o'clock on a summer's morning men may be heard going along the road to the cheese factory. Their



A CHEESE FACTORY.

large cans are filled with milk. They must be early risers to get their milking done as early as this! They must often carry their milk several miles.

One man is pouring the milk from a can into the great tank within the building, where it is to be weighed.

We usually speak of measuring milk by the quart or gallon. Here it is measured by the pound. About ten thousand pounds of milk are delivered at this factory each morning.

It is poured into great zinc-lined trays and rennet is mixed with it. The trays are kept over tanks of warm water, and after a few hours the rennet causes the milk to become solid.



DRYING CHEESE.

Then it is raked with metal rakes or combs, and it is separated into little kernels that look like popped corns and a watery whey.

The whey is drained off, the kernels, called curds, are mixed with salt and put into great boxes to be pressed.

When the pressing is done, the fine, even rows of cheeses are set out upon the long tables to dry.

It will be several weeks before they are ready to be sent to market.

You would like to eat cheese from this factory if you could see how very beautifully neat everything is kept.

Much of the milk is sent to Boston and other large cities.

NEAR BOSTON.

Have you read Longfellow's poem, "Paul Revere's Ride"?

This is the old North Church in Boston, in which the signal lanterns were hung.

You remember how the poem begins:



OLD NORTH CHURCH.

**"Listen, my children, and you shall hear
Of the midnight ride of Paul Revere;
On the eighteenth of April, in Seventy-five;
Hardly a man is now alive .
Who remembers that famous day and year.
He said to his friend: If the British march
By land or sea from the town to-night,
Hang a lantern aloft in the belfry arch
Of the North Church tower as a signal light—
One, if by land, and two, if by sea;
And I on the opposite shore will be,
Ready to ride and spread the alarm
Through every Middlesex village and farm
For the country-folk to be up and to arm."**

The Americans feared that there would be a war with England, and they had collected cannon and stores in the town of Concord.

General Gage, the British leader, had planned to take these stores by stealth, and started from Boston with his men before midnight on that eighteenth of April.

Paul Revere had given warning, however, to the people in Charlestown, across the river, and he galloped on ahead and sounded the alarm to the sleeping farmers in the towns along the way.

When the British reached Lexington at daybreak, they found about sixty patriots drawn up on the village green.



LINE OF THE MINUTE-MEN.

"Stand your ground. Don't fire unless fired upon, but if they mean to have a war, let it begin here."

This rough block of stone shows where the minute-men stood.
Why were they called minute-men?

What was the result of the skirmish with the British?

Not very far from the bridge where the battle of Concord was finally fought that day, stands the picturesque old house shown on the next page.

It was standing there when the battle was fought.

It belonged to a grandfather of Ralph Waldo Emerson, whose books you will like to read some day. Many of the noted men of the country have been entertained within its hospitable walls.



EMERSON HOMESTEAD.

Nathaniel Hawthorne, who wrote the story of "The Great Stone Face," brought his bride to this house to live.

Here he wrote the sketches which he called "Mosses from an Old Manse."

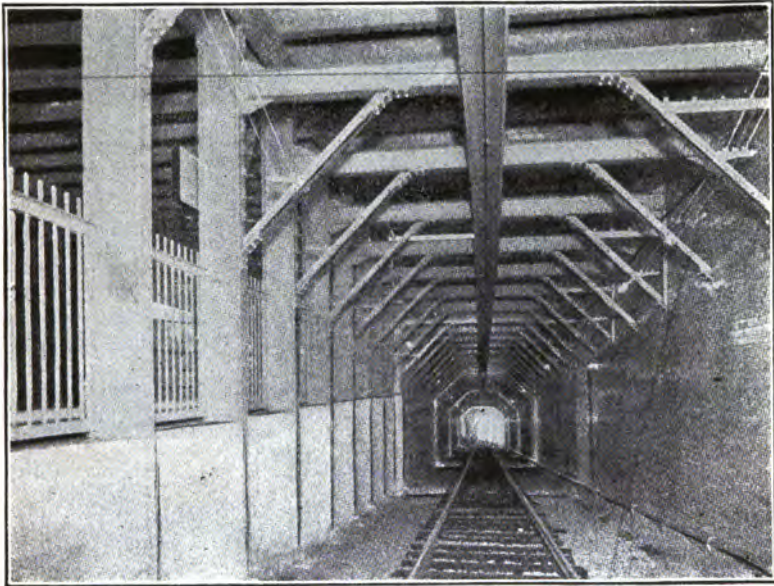
In a field near by Hawthorne used to like to walk with his friend, Thoreau, another interesting man, whose books you will some time want to read.

They picked up many flint arrow-heads in this field, that showed who had lived in that region long before their day.

People do not have to travel about Boston on horseback, now, as they did in the days of Paul Revere.

Will you ride under the Public Gardens in the sub-way,

or will you take the elevated road instead, and go skimming over the heads of people in the streets below?



SUBWAY—BOSTON.

The Public Gardens are close by the Common, which was the finest park in the country for many years.

The Gardens are filled with brilliant and beautiful plants and flowers.

Across the wide Charles River is the city of Cambridge.

The oldest college in the country is at Cambridge. Do you know its name?

Not far from the college campus stands an old elm tree.



WASHINGTON ELM—CAMBRIDGE.

Cambridge people are very proud of that tree, for under its branches George Washington stood when he took command of the Continental army on the morning of July 3, 1775.

A little way down Brattle Street stands the house which the General used as his headquarters.

We are most interested in the old mansion, however, because it was for many years the home of the poet Longfellow.

Which of Longfellow's poems do you like best?

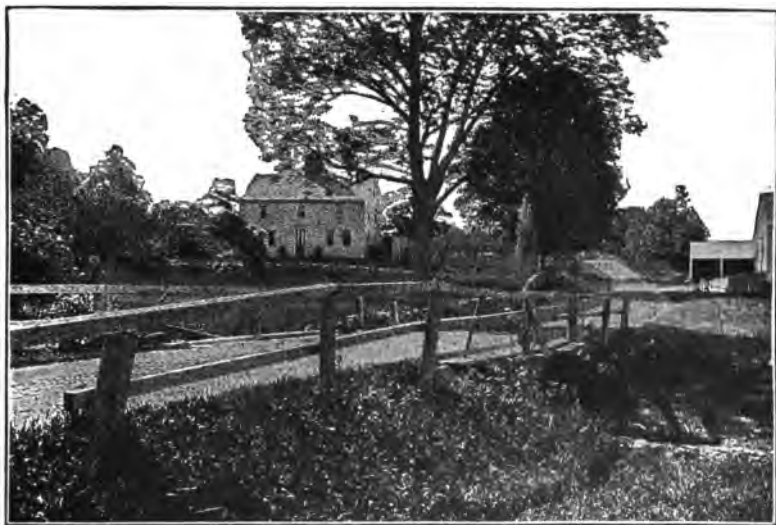
Many of them were written here in the old Craigie House, as it is called.

In his study at the right of the hall his desk still stands. There, too, may be seen the chair which the school children of Cambridge had made for him from the famous chestnut tree which used to stand near by.

You know the poem called "The Village Blacksmith," beginning :

"Under a spreading chestnut tree
The village smithy stands."

In this same room General Washington held his councils of war.



WHITTIER'S HOME.

This house, in the town of Amesbury, was the home of another poet—the Quaker poet, John Greenleaf Whittier.

He was a friend of the poet Longfellow and of all the famous writers who used to live about Boston.

I wonder if his poem called "Snow-bound" is not one of your favorites?

You would enjoy a trip to this old home of Whittier's on the lovely Merrimac River.

How pleasant the country road looks that passes the house!

All of his life the Quaker poet lived in the state of Massachusetts, and his poems tell us how well he loved its streams and hills and sunny fields.



MONUMENT OF HANNAH DUSTON.

In the center of Haverhill is this monument to Hannah Duston.

You may read in the histories how she lived in the days

of a cruel Indian war; how, when she was ill, the Indians carried her and her nurse away and killed her little baby.

After having been taken many miles up the river, with the prospect of being carried much farther into the wilderness and of being most cruelly treated, she rose up early one morning and killed ten stalwart savages while they were asleep.

Then, taking their scalps with her to show what she had done, she seized the canoe in which they had come, and escaped to her friends.

Many of the towns in the New England States have monuments and traditions of those early days of hardship.

The spot where Hannah Duston slew the Indians is on an island where the Contoocook River joins the Merrimac. The island is near Pennacook, New Hampshire, a few miles above the city of Concord.

A fine monument has recently been erected to mark the spot.

In the "Bridal of Pennacook" Whittier has written these lines:

"But thy Pennacook valley was fairer than these,
And greener its grasses and taller its trees;
Ere the sound of an axe in the forest had rung,
Or the mower his scythe in the meadows had swung.

"In their sheltered repose looking out from the wood,
The bark-built wigwams of Pennacook stood,
There glided the corn-dance, the council-fire shone,
And against the red warpost the hatchet was thrown.

"There the old smoked in silence their pipes, and the young
To the pike and the white perch their baited lines flung;
There the boy shaped his arrows, and there the shy maid
Wove her many-hued baskets and bright wampum braid."



ICE CUTTING.

ICE CROP.

We raise many crops in our fields in summer, but we must wait for winter before we can harvest a crop from the river. The colder the weather the better the crop.

The ice men watch the ponds as anxiously as the farmers watch the fields.

What is the first thing to be done before the ice in this pond will be ready to cut?

If the top of the ice is porous, as it often is, all of this porous ice must be scraped off.

Then it will be marked out in large squares. Along the lines the ice is grooved to a depth of about three inches by means of a plough.

An instrument something like a harrow is drawn over the grooves so as to deepen them, and after the surface has been divided into smaller squares, the ice is cut up into blocks by saws.



STORING ICE.

Long ago ice was stored in deep wells, usually dug obliquely into the side of a hill.

At the bottom of the well an iron grating covered a drain where the water could run off.

Then the luxury of ice in the summer was not appreciated as it is now.

Have you ever heard of the Free Ice Fund in our large cities?



PACKING ICE.

Now large storehouses are built which hold thousands of tons of ice.

Why do ice-houses have double walls?

For home use ice does not need to be more than a foot thick; but that which is to be sent a long distance is not cut until it is nearly twenty inches thick.

The Hudson River is one of the important fields for the ice harvest.

The rivers of Maine are also a source of large supply, and a fleet of vessels is employed for its delivery to New York and other coast cities.

Cargoes are sent direct to the ports of the West Indies and north coast of South America. Maine ice is highly appreciated in the tropics.



HOISTING THE STARS AND STRIPES ON THE PALACE, HAVANA, JANUARY 1, 1899.

CUBA.

Do you remember when the United States soldiers went to the war in Cuba?

Why did they go?

Who were the people that the Cubans were fighting against?

Why didn't we let them fight their own battles?

It was a red and yellow emblem that was hauled down from the flagpole over the palace in Havana when the Stars and Stripes went up.

What did this change of flags mean?

Who are the rulers in Cuba now?

If you can answer all of these questions you have learned a good deal of history.

What a picturesque city Havana is, with its fine new buildings and quaint old ones!

On the east side of the harbor entrance stands the fortress of El Moro, or Morro Castle, as the English call it.

It was built as long ago as the days of the English Queen Elizabeth.

Who was the ruler in Spain then?

It has been chiefly used as a lighthouse, though of late years it has been made into a dreary prison.

At the foot of the grim stone structure is a water-battery bearing the curious name of the Twelve Apostles.

Do you know how deep a blue the water of the ocean is about the West Indies?

If you were sailing into Havana you would notice that, near the shore, this deep blue color changes to a soft, pearl green.

That is where it overlies the banks of growing coral reef.

You have read how the body of Columbus used to rest in the old cathedral at Havana, and how, a few years ago, it was taken back to Spain.

But in the city of San Domingo, on the adjoining island of Haiti, the people claim that his body still lies in their cathedral, and that it is a mistake to think that long ago it was taken to Havana.

We shall never know which story is true, I suppose, but in the old San Domingo cathedral they still point to the place under the high altar where they say the body of the

great discoverer lies, and they show an old sea chest which belonged to Columbus.

Many of the houses or the poorer people in Havana are built side by side in a continuous row, and are shabby enough, but the houses of the wealthy classes are, many of them, very beautiful.

They are built around an open court where the family spends most of the time.

Some one has said that in the United States the houses are built inside the yards, but in Cuba the yards are built inside the houses.

These little courts, or patios, as they are called, are cool and shady. There are couches, and chairs, and tables, under the arbors of flowers. Rich, tropical plants are all about, and fountains are splashing among the green leaves.

Here the father of the family enjoys his cigar, as he rests



HIGH ALTAR OF SAN DOMINGO CATHEDRAL, SURMOUNTING
ALLEGED REMAINS OF COLUMBUS.



STREET IN AN OUTLYING BARRIO, OR WARD, OF HAVANA.

after the day's work. His cigar is made from the finest tobacco in the world. It grew on one of the farms not far from the city.

You have doubtless heard of the famous Havana cigars.

The men who work in the cigar factories are very skillful and get high wages.

There is an interesting custom followed in these factories.

A man who can read well is hired by the workmen to come for an hour or two each morning and afternoon to read to them while they are at work.

The men contribute ten cents a week to the reader's support, and as there are often two or three hundred workmen in a factory, he gets a good income.

They usually read story books, it is said, but sometimes books of travel and history.

Cienfuegos is on the south side of the island. It is a modern little city, with lovely plazas, fine shade trees and good houses.

Some of the best sugar estates in the world are near the city.

We have a little picture of a building called a **sugar-central**. That means it is a mill centrally located, where all of the sugar-cane from the surrounding country is brought to be made into sugar.



A CUBAN SUGAR-CENTRAL.

Inside of this building is machinery to squeeze the sweet juice from the stalks of the cane, tanks in which the cleansing is done, and great vats in which the juice is boiled to a thick syrup. Then there is a drying machine to separate the sugar from the thick molasses which is left.

There is one enormous sugar-central near Cienfuegos which ships over a hundred tons of sugar in a day.

This is Matanzas, the great sugar port on the northern shore, as Cienfuegos is on the southern.

What else is sent away from Cuban ports besides sugar? Matanzas is the most healthful city in Cuba.

The streets in the poorer part of the city are wider than those in Havana, and there are larger yards around them.

You would notice, however, that the people have not learned to build their houses above the level of the sidewalks; so in the rainy season, when the Yumuri River rises and overflows its banks, many of the houses are sure to be flooded.

The country about Matanzas is very beautiful.

That must be a fine road by the side of the Yumuri River.

After a little it winds up the hillside among the palm trees, and one can see many miles across the valley.

Some prefer to take their little pleasure excursions by boat.



DRAWING WATER.

But all visitors from Matanzas like to drive over the good road that leads out to Bellamar Caves.

The curious rock formations make one think a little of the pillars and roof of a church.

Though the people of Cuba are fast learning to use tools and machinery, such as we have, they still have curious and hard ways of doing many things.

Can you see from the picture on the opposite page how water is being drawn from the well?

The rope which goes over a sort of pulley and then down into the well is fastened to the yoke of the oxen.

When the man leaning over the well has filled the bucket, what will the little boy in front of the oxen have to do about drawing it up?

These quaint-looking little black children will have a better time in Cuba than their fathers have had, we think.

Why may that be true?

How glad the Cuban people must have been when they saw the last of the Spanish soldiers leaving Cienfuegos on February 5, 1899.

I think that the soldiers must have been glad, too, some



FUTURE CITIZENS OF CUBA.

of them, that the cruel war was a thing of the past, and that they were going to their homes again.

Have you ever seen a picture of the young boy who is now King of Spain?

Of course, such a lad could not be wise enough to rule a nation; other people must do that for him until he has grown to be a man.

Then, perhaps, he will be a very wise king.



ALFONSO XIII., KING OF SPAIN.

PORTO RICO.

Isn't this a curious wagon, loaded with the big sacks of coffee seeds?

Do you know how the coffee plant looks?



COFFEE-DRYING YARD ON A PLANTATION IN PORTO RICO.

It is an evergreen plant, and would grow to a height of eighteen or twenty feet if it were not pruned.

On the coffee plantations, however, the trees are not allowed to grow higher than six feet, for it is easier to gather the berries from lower trees.

The berries look something like small, dark-red cherries. There are two seeds in each berry, laid against each other. When the berries are ripe and begin to shrivel up, it is

time to pick them. Then the seeds are removed and spread out to dry. There is a little outer skin which must also be removed after they are dry enough.

What else must be done before the coffee is ready to be made into a drink?

This coffee plantation is on the island of Porto Rico.

Does the United States have the same kind of care of Porto Rico that it has of Cuba?

How is it different?

The people of all of the West Indies cherish the memory of Columbus.



STATUE OF COLUMBUS, ON THE PLAZA, SAN JUAN.

Here is the fine statue that stands on the Plaza in San Juan, Porto Rico.

If you were to walk along this business street you would notice several things that would seem odd to you.

The houses have no chimneys. That gives them a curious look, as if something had been forgotten in the building. Then you would be surprised at the bright colors with which they are painted, blue and yellow and red.

Every house has a balcony. That is where the well-to-do people spend their evenings. The owners of the houses always live up-stairs, while the down-stairs tenements, opening right on the street, are rented to poor people.

A little girl has ridden into the city on her pony to sell flowers.

As she came into the town, through the green country, she passed by sweet-scented orange groves and fields of great banana plants upon the hills.

What enormous plants they are, in this moist climate, growing twenty feet high, with leaves a foot wide and as long as a man is tall!

There were bread-fruit trees, too, for her to see, with their pan-like leaves flopping at every stirring of the breeze.

Perhaps she crossed some brooks on the country roads, for Porto Rico has a great many streams, but her well-trained pony didn't mind that, even if there were no bridges.

I wonder what sort of flowers she has in her basket.

The Porto Rican ponies are small, but very strong and wiry. They are gentle, too, and have a peculiar gait, which makes riding upon them very easy.

Thick pads are laid upon the pony's back and a saddle-basket hangs from each side.

The rider sits on his cushions with his knees reaching forward to the pony's neck, and makes himself extremely comfortable.



ON THE WAY TO MARKET, NEAR PONCE.

What packs these little creatures can bring into town— oranges in immense round baskets, weighing as much as two hundred pounds ; a pair of hogs in two great baskets, one on each side ; such bales of grass that the pony is almost hidden from view ; or perhaps the whole family, riding at a time, the father and mother on the cushions, and one or two children strapped in the ever present baskets !

The Porto Ricans are kind to their little ponies, and well they may be, for they are good servants to their masters.

The fine, large cattle shown in the picture on the next page were raised on a stock farm in Porto Rico.

Do you wonder where the sheds are, or the barns where all this stock is fed ?

There is hardly a barn on the island. In the warm, moist climate, stock of all kinds feeds in the green pastures throughout the year. The animals are tethered to stakes to keep

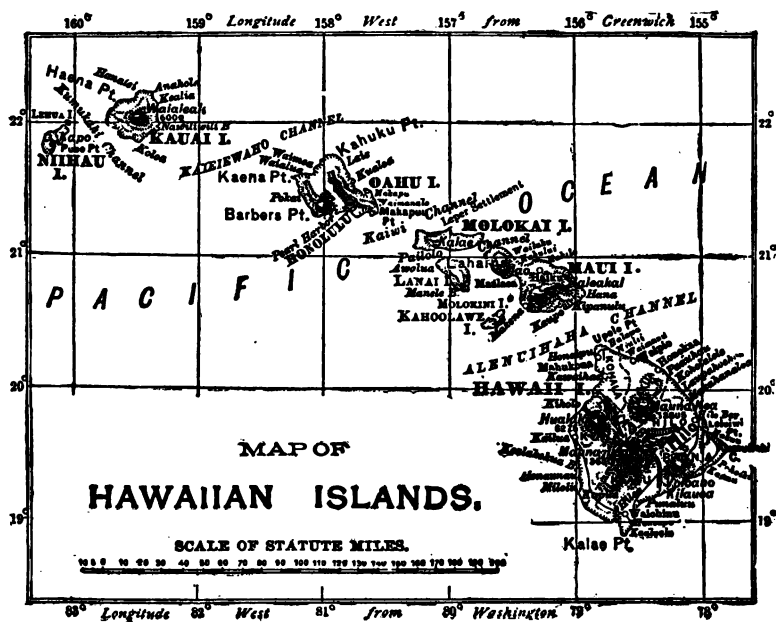


STOCK FARM IN PORTO RICO.

them from roaming from their own pastures, or else the fields are surrounded with barbed wire fences or hedges of prickly wild pineapples.

It would seem to be easy work to take care of herds in such a country, as the pasture is green all the year.

It is found, however, that the beef from these cattle is not as fine as from cattle raised in our northern climate.



THE HAWAIIAN ISLANDS.

About the time that the leaders of the American people signed the Declaration of Independence, a brave English sailor was exploring the waters of the great Pacific Ocean.

This man was Captain James Cook.

He discovered a group of islands which he named The Sandwich Islands, in honor of his friend, the Earl of Sandwich.

The natives called the largest island Hawaii, however, and

gradually the old English name has been dropped, and all of the islands to-day are called the Hawaiian Islands.

The natives thought that Captain Cook was a god, and his wonderful ship a vessel right from heaven.

Nothing else about the ship pleased them so much as the nails with which it was put together.

There is no metal found on the Hawaiian Islands, and so the natives had to make all of their cutting instruments of stone or of sharks' teeth.

They thought that the nails would make fine tools, so they dived under the ship and pulled them out of the keel.

This made the sailors angry. A quarrel followed, and Captain Cook was killed.

The priests guarded his bones and received offerings from the people for many years in his honor.

The people were ruled by chiefs who owned everything on the island and all the fish in the sea. The common people were all serfs.

Did you ever hear any one say that something which is not lawful to have is "tabooed"?

That word came from a curious custom among these people.

If a chief wanted something which belonged to a serf, he declared that it was taboo. That meant that no one could have it but himself.

If he saw a fine crop flourishing in a field, he stuck up a pole in it with a streamer attached. That meant it was taboo.

If he wanted an unusual amount of fuel for any purpose,



IDOLATROUS TEMPLE OF ANCIENT HAWAII.

he declared fire to be taboo, and then the people must do no cooking, but eat the food raw, leaving all the fuel for the chief.

All the houses in those days were made of grass and bamboo, but the chief's house was known by a kind of dark fern that was woven in at the corners.

This grass house of which we have a picture is a modern house. You know that from the glass windows.

Very few natives build grass houses now, however, but have good houses of wood. They have churches, too, instead of idol temples, and schools, in some places, for the boys and girls.

Honolulu, the capital of the Hawaiian Islands, has the only harbor where steamers can dock.

Of course, that is where most people who visit the island make their first landing.



A CHIEF'S GRASS HOUSE.

In many places natives go out to the steamers and take the passengers ashore in canoes.

The picture on the following page shows how the landing is sometimes made.

How would you like to be swung out over the water in this way?

It takes no little courage to make a landing in this way.



A PRECIPITOUS LANDING PLACE.

The crane lifts a man from the boat and swings him ashore, just as they would move blocks of marble out of the quarry.

In the picture it looks as if a rope were tied about the man's neck, but he is really sitting in a sort of swing.

At one of these rough landing places an American girl was drowned a few years ago.

Her father was ill in Honolulu, and though the water was very rough, she decided to try to go to him, and was swung down to the little boat below.

But a great wave overturned the boat almost instantly, and the young girl lost her life.

Where do all of the ships come from that one sees in Honolulu Harbor?

From the east and from the west. Here are vessels from



HARBOR OF HONOLULU, WITH MOUNTAIN RANGE.

San Francisco, from Japan, from China, from New Zealand and from Australia.

Why are the ships going between North America and Asia very glad to have this place to stop at, on their long journeys?

Do you know what country the Hawaiian Islands belong to?

The beautiful palms in the Queen's Hospital Lane make us think of some others that we saw in the island of Cuba.

It is like the avenue of royal palms at Havana, is it not?

Here in Honolulu the same beautiful trees line many of the fine streets.

There are flowers everywhere, lilies and orchids and chrysanthemums, thousands of them, but strangers are most

impressed with the brilliant crimson blossoms of a vine which covers nearly every house and church and wall. One is not surprised to hear this city called the Paradise of the Pacific.

Visitors like to drive up the rugged road to the summit of Pali, where one can look across the Nunanu Valley.

It was hard work to build this road on the steep mountain side.

The natives would never have done it, but American engineers are not afraid of difficult work.

Do you enjoy sliding down hill?

How would you like to slide down a wave?

It is a national sport of the Kanakas, as the natives are called, to ride down a great wave, seated on a board.

Out at Waikiki Beach, four miles from Honolulu, is a beautiful watering place, where the wealthy people from the city have fine villas and cottages.

It is great fun to watch the wave sliding and to go canoeing with the skillful Kanakas.

What curious canoes they have!

They are so narrow that they would be overturned very easily if it were not for the outriggers that help to balance them.

The boats are carved out of a log.

Robert Louis Stevenson once had a cottage at Waikiki Beach, which he enjoyed very much.

You know many of the poems which he has written, I am sure. Some day you will like to read his letters from the South Sea Islands.



AN AGED KANAKA WOMAN.

This old Kanaka woman thinks that she is very well dressed to-day. She wears the loose gown which the women usually wear, but then, you see, she has on her best necklace and brooch.

What do you suppose the necklace is made of ?

Hundreds of threads of human hair are twisted together in the little ropes.

And the breastpin! That is a human bone.

She wears it because she thinks it is ornamental and also because it is a charm to keep away bad luck!

When she wears anything on her head it may be a **straw** hat, much like those which American women wear, and which looks odd enough with the rest of her costume; or it may be that she will wear a turban made of a gaily colored handkerchief.

There is one word which perhaps the Kanaka uses oftener than any other.

The word is "mahapi." That is what he almost always says when he is asked to do anything. It means "by and by."



A PINEAPPLE ORCHARD.

In a land where coconuts and pineapples and bananas may be had for the picking, perhaps it is no wonder that the natives are lazy.

The Kanaka does not have to provide for cold weather, for cold weather never comes.

If he spends an hour a day in working on his taro patch it is about all that he has to do. The taro is a water plant the root of which furnishes his principal food.

Great fields of sugar-cane may also be seen on every hand.

Sugar-cane grows higher than corn, in a thick mass of stalks and leaves.

A railroad runs through the field from one end of it to the other.

After the cane is cut it can be easily taken to the factory.

The native Kanakas let the sugar-cane grow wild, but Europeans and Americans have learned that much better sugar can be obtained if it is carefully cultivated.

The sugar-cane does not grow from seed as corn does.

When the stalks are cut, pieces are taken from near the top, and are laid flat in furrows dug in the fields.

Then they are covered with earth, and the next season little, fresh, green stalks of cane spring up from every joint of the cane that was planted.

The juicy part of the stalk is near the bottom. That is the part that is taken on the cars to the factory.

Sugar-cane is raised in the United States, but not enough to furnish all the sugar which we need.

Some is sent to us from the Hawaiian Islands.

No people are more fond of flowers than the Kanakas.

Young and old, men and women, love to decorate themselves with wreaths.

At a picnic all of the guests, even to the old grandmother, have wreaths about their necks.



A LUAN, OR NATIVE FEAST.

These are neighbors who have come together and each one has brought something to the feast.

They have had poi, a sort of porridge made from the taro plant, bananas and coconuts, raw fish and roast pig.

They are having a very jolly time sitting on their grass mats and feasting together.

They look rather solemn just now, but a great many people look solemn when they have their pictures taken, you know.

Doesn't the picture on the following page make you think of Niagara Falls?

Only this is not a river of sparkling clear water that is falling over the rocks. It is a river of hot lava pouring down from Mauna Loa at the rate of thirty miles an hour. The mist is not spray, but steam.



LAVA FLOW FROM MAUNA LOA MOVING TOWARD THE SEA.

There are now only three active volcanoes in the Hawaiian Islands. Mauna Loa is one of these.

Kilauea is another peak. The natives believe this to be the home of Pele, the goddess of fire.

It is when Pele is angry that she pours her terrible streams of lava over the land, they say.

When the natives want to approach the edge of the great crater, they first throw in a handful of berries to Pele as a gift.

A curious sort of fern, having slender, reddish leaves, grows on the mountain sides. This is called Pele's hair.

When Pele is angry and sends out torrents of flame and lava, the light from the flames has been seen nearly a hundred miles out on the Pacific Ocean.



LAVA, COOLED IN FANTASTIC SHAPES.

The lava cools in fantastic shapes, and, after awhile, it sometimes cracks open and forms deep chasms.

Perhaps you have seen jewelry and trinkets carved from lava, which has become as hard as a stone.

Should you like to live in a country where there are volcanoes?

What do you mean by an extinct volcano?

THE PHILIPPINE ISLANDS.

Can you tell what these girls are doing?

They are making cigars, which will be packed in boxes by and by, and sent away on ships to countries which they never heard of.



CIGAR FACTORY, MANILA.

This seems to be a light, pleasant room in the big cigar factory, but you will notice that you cannot see anything through the large windows.

The tiny panes are not made of glass, but of concha shells, ground very thin.

Concha shells are something like mother-of-pearl.

These girls live in the city of Manila on the Philippine Islands.

Manila is almost as far away from New York as a place can be. That is, it is nearly half-way around the world.

What countries are the Philippine Islands near?

On the map these islands do not seem to take up very much room ; but really it is about a thousand miles from the little islands farthest north to those farthest south.

Manila is the only important city upon these islands.

It nestles down under the mountains on the western coast of the island of Luzon, on the shore of a deep bay.

This bay is large enough to hold the navies of all the countries of the world.

Manila is a very old city, over three hundred years old.

The Philippines belonged to Spain, you know, and they were named for a Spanish king.

It would not be hard to guess his name.

The king sent a coat of arms to the city, with the motto, "Very Noble and Always Loyal City."

The native people, however, thought that was not a good title for their city, and they called it "Child of Silver and Child of Gold."

How peaceful the broad bay appears, out beyond the river's mouth !

But it is not always like this. Fierce typhoons come rushing across the country and wreck many a boat that seems



MOUTH OF PASIG RIVER, HARBOR OF MANILA.

safe in the bay. Or, perhaps, a water-spout appears, and more destruction follows.

Lighthouses built high above the water help the sailors to guide their ships safely into the harbor.

Two islands guard the entrance to Manila Bay like sentinels.

On the lofty summit of Corregidor stands a lighthouse.

It flashes colored lights out across the China Sea for scores of miles.

If they were properly fortified, it has been said that these two islands could guard Manila Bay against the world.

But the forts on Corregidor which the Spaniards occupied could not keep Admiral Dewey away from the city, for the guns were too ancient.

Another light can be seen many miles across land and sea. A graceful cone-shaped mountain, higher than Mt. Washington, rises from the plains southeast of Manila.



VOLCANO OF MAYON, SOUTHERN LUZON.

This is Mayon, a volcano, which is always burning. Sometimes there are terrible eruptions from Mayon. Then strange noises are heard underground, and rumblings like distant thunder.

Earthquakes follow, and suddenly a great cloud of fire and smoke bursts from the mountain top.

The smoke spreads quickly over the sky. It grows almost as dark as night. Hot stones and ashes begin to fall. Great streams of hot lava pour down the mountain sides.

Whole villages have been burned and buried. In some places even tall forests have been quite covered with the falling ashes.

You have heard of Pompeii. Here on Luzon the same story might be told.

In the house of every native of Manila a tiny lamp is kept burning all night long.

It is a curious little lamp. A cup is nearly filled with water and a little coconut oil is poured over it. On this floats a wick which is supported by a bit of tin.

Why do you suppose the Filipino always wants a light?

It is because he is more afraid of earthquakes when he is in the dark.

The Filipino believes that the earthquake frightens away the locusts which destroy his crops.

It must be a heavy earthquake, indeed, that could ruin a strong tower like many seen in Manila.

There are two distinct cities in Manila—the new city with its fine residences and its business streets, and the old Spanish walled city.

The heavy old walls of the fortified city show how towns were protected two or three hundred years ago.

In some places the walls are forty feet thick, and double at that.

Here the sentries used to stand.

There are six gateways through these walls.

What are the chains for at each side of this gate?

Even up to within a few years, the drawbridge was always drawn up at nine o'clock in the evening.

Then the people in the city felt very safe from their enemies, I suppose.

Bridges connect the old city with the new. The Bridge of Spain is the finest of these.

All of the bridges have high arches, for the high *cascos* must pass under them. These are the boats which bring most of the produce from the interior of the island.



THE ESCOLTA AT ELEVEN O'CLOCK IN THE FORENOON.

The Filipinos do not speak of New Manila, as the Americans do. This part of the city they call Binondo.

Toward the Bridge of Spain runs the Escolta, lined with stores much like those of any large city.

Will you buy a French hat, and a Swiss watch?

You will find them here. Here, too, are music stores,

book stores, tailor shops, photograph galleries and restaurants.

One thing makes the Escolta seem unlike a street of an American city.

Before noon, awnings are dropped closely over all the windows, and the street is almost deserted.

Everybody sleeps in the middle of the day, and so is refreshed for business and pleasure after the air is cooler.

A bath in the river will add to one's comfort, perhaps.

In the early evening it is pleasant to sail upon the river or the bay.

The natives spend many of their evenings at the theaters, which are kept open the year around.

They are not hot, as our great opera-houses would be in summer, for they are open to the sky, and the walls are only fences of bamboo.

Few people are so poor that they cannot afford to go to the theater here.

The Filipino pays only five cents for the best seat, and two or three for one not quite as good.

On the following page we see the milk-woman. She is quite erect, though she is no longer young.

The Filipino women spend a great deal of time in dressing their hair.

If you try to walk with a heavy weight on your head, you will find that you have to stand very straight.

When she was younger very likely the milk-woman sold flowers, and was dressed in bright colored costumes.

Then she wore her long, glossy, black hair, flowing down



NATIVE MILK-WOMAN.

her back. She was very proud of her shining locks, which she frequently washed and dressed with coconut oil.

Two women, meeting in the street, and stopping to talk together, immediately take out their combs and begin to comb their long locks.

They will keep it up as long as they stand talking together. No one appears to notice them, it is such a common sight; but it would look queer enough in the streets of Boston or New York, would it not?

When they walk away, you will see that they shuffle their feet. That is to keep their flapping, heelless slippers from dropping off.

This is a very light burden for this woman, and it only requires skill in balancing, but some of these women carry on their heads heavy weights that would task a strong man to lift. The necks of these women are very strong and muscular.

This young lady's father is a man of some wealth. Her harp cost about three hundred dollars. She has learned to play upon it very well.

Nearly every Filipino plays upon some musical instrument.

Even little children seem to play almost as naturally as a bird sings.

The wealthy people have all sorts of instruments in their houses, pianos, harps, violins, mandolins and guitars, and even the very poor have some kind of a musical instrument, though it may be only a home-made trombone, made from a petroleum can!



TAGAL BELLE.

It seems odd enough to a stranger to hear the strains of a familiar Spanish march coming from under the roof of a rickety Filipino hut.

On the following page is a group of country boys and girls. Perhaps they have never been to Manila.

It is not easy traveling over rough roads with such a cart as this.

Did you ever see a cart with solid wheels?

How it must go jarring along the country roads that are covered with rocks and hummocks of earth!



ON A COUNTRY ROAD IN THE INTERIOR.

In the village there may be one fairly passable road, but that is all.

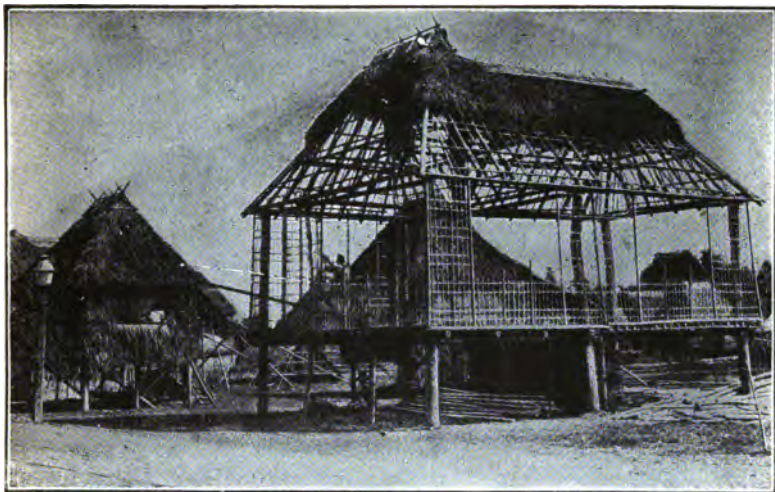
The village houses are all much alike.

The framework is of bamboo canes ; the side walls are sometimes made of split bamboo and sometimes thatched with palm leaves or a coarse grass.

In the open room, which is a sort of veranda, the natives spend much of their time when they are not at work.

Here they stand and talk with friends in the street below, and here they weave and sew.

Behind this room is the parlor. Here are hand-made chairs and tables, and a little shrine where there is a crucifix or a wax Virgin.



BUILDING A BAHAY, OR NATIVE HUT.

A coconut-oil lamp hangs from the rafters, and somewhere near is the musical instrument.

Tiny bedrooms open from the parlor. The kitchen occupies a separate building.

Philippine housekeepers are usually neat. They scrub their floors each day and carefully dust all of their treasures.

It doesn't take long to wash the dishes where few plates are used and no knives and forks.

The beds are lengths of split bamboo, laid on the floor with a hempen mat thrown over them, so they are quickly made.

No wonder, do you think, that the Filipina has plenty of time to play upon her guitar?



BAMBOO BRIDGE AND VILLAGE STREET.

It is interesting to see the natives spear fish.

How swiftly they turn their slender boats about in the water!

'They often serve their fish uncooked. We might learn to enjoy other native dishes, perhaps, but not raw fish.

How lithe and strong these men are!

Their bodies seem to have something of the strength and springiness of the bows that they shoot with.

Ever since they were babies they have lived out of doors, exposed to the sun and wind. They have run and swum and climbed trees like monkeys.

They are very brave, and are famous warriors



NATIVES SPEARING FISH.

They were not brave, though, when they saw the first locomotive rush along the new, shining steel rails, when the railway was opened.

They threw themselves on the ground in terror. They didn't know how to fight such a strange monster as that.

The little Filipina on the following page has just come to the American camp to beg for bits from the table.

She thinks that the soldiers have delicious food, though she enjoys her own fare when she cannot get better.

She lives principally upon rice. On feast days she has roast pig. Sometimes she has beetles and fried locusts for a relish.



A LITTLE FILIPINA.

She often drinks the sap of the coconut palm, which is collected in buckets, as the maple sap is collected for making maple sugar.

Very soon she will be married. If she lived up in the wild regions north of Manila, her father would perform the marriage ceremony by pouring water over her head and that of her lover, from the same coconut shell. Then he would bump their heads together, and they would become husband and wife.

This little maid lives near Manila, however, and is partly civilized.

She will be married by a priest, between five and six o'clock in the morning.

The wedding feast will last all day, though the guests will

go home at noon to take a nap. Then they will come back and there will be dancing and music and feasting until evening.

Not all of the Filipinas dress as poorly as the little maid

we have just seen. Here is a wealthy young lady in a silk dress that would cost many hundred dollars.

Indeed, many of the women who live in poor little bamboo



MESTIZA BELLE IN RICH EVENING DRESS OF PINA SILK.

huts wear costly gowns of "pina" silk when they go to festivals and weddings.

Whatever the material is, the form of the dress is always the same.

There are the large flowing sleeves, and a curious collar open in front.

This young lady wears her gown cut after the usual fashion in Manila, but her fan came from Paris.

Long before Columbus was born, the Chinese had come over from the mainland to the Philippine Islands, and many of them have lived there since.



WEAVING HEMP IN A NATIVE SHOP.

They weave different kinds of cloth on their curious looms. The very best tailors in Manila are Chinese.

The tailor will stand his customer on a box, and take his measure with a strip of paper torn from the edge of a newspaper. He will make little slits at different places, to show the length of the sleeve or the width of the shoulders.

If the customer is an American, he may be afraid that his

coat will not fit, after such careless measuring, but the tailor says: "No fittee, no takee."

It is pretty sure to be a good-looking coat when it is done.

At the door of nearly every hut stands a huge mortar for pounding rice.

This work falls to the women.



NATIVE WOMEN HULLING RICE.

Indeed, so many kinds of outdoor work are done by the women that the cooking of the meals and the care of the children often falls to the men. It is difficult for English

families to find a little nurse girl to help them; but there are plenty of little boys who know all about caring for babies.

The Filipinas never have the trouble of filling wash-tubs.

Why should they, when the river is always full of water?

Here come the girls at sunrise, and the family washing is soon done. It doesn't take very long where almost no one wears stockings or underclothing, and where cuffs and collars are unheard of.

In Manila there is a laundry. Here the laundry man builds a little fire in a brass flat-iron that looks something like a little old-fashioned warming pan.

He runs that over the clothes, and thinks he has made them look very nice.

Nearly all of the well-to-do families own a caromata.



TAGAL FAMILIES IN CAROMATAS.

It doesn't look like a very easy carriage to ride in, but it is a hospitable one. There is always room for one more.

The sleek little ponies jog along contentedly. It doesn't seem to matter much to them how many are piled in for them to drag.

They are strong, and they are used to heavy loads.

It is only on the good roads near the towns that the caromatas can be used.

On the country roads one must travel either on foot or on horseback. These are the only methods of travel.



CARABAO AND WHEELED CART.

There are no oxen in the Philippines. The carabao, or water buffalo, is the beast of burden.

He is a clumsy-looking animal, but very strong. He eats swamp grasses. He cannot live without a great deal of water to drink, and his daily mud bath is necessary to his comfort.

He wallows about in the swamp, and the mud clings to

his coat. It soon dries and makes the stiff covering that protects him from the stings of insects.

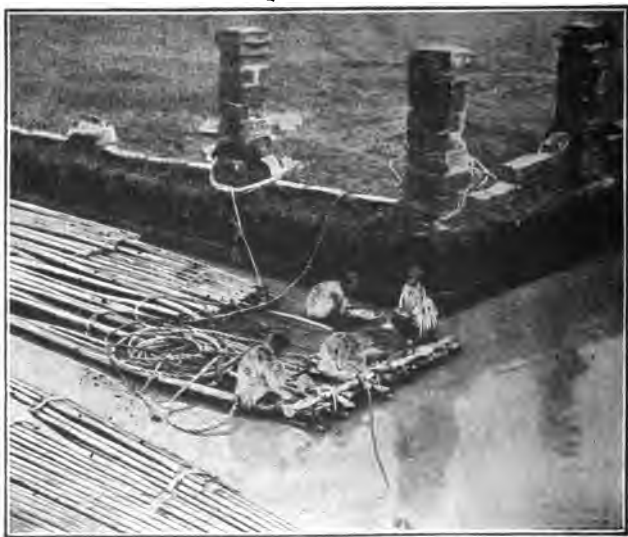
The Filipino uses a curious plow.

Out in the field the white heron and other birds follow the carabao and feed on the worms and insects which the plow uncovers.

Sometimes a fearless blackbird perches on the carabao's head and pecks away at little insects which he finds in the carabao's mud coat.

The great, clumsy, dirty animal is a family pet.

The boys ride him to water and the little children slide down his back.



RAFTING BAMBOO TO MANILA.

Pigs and chickens are great pets also, and may be found about every farmer's door.

This fine, straight bamboo is going to be floated down the river.

How will it probably be used when it reaches Manila?

You see how the rafts are fastened together. One is safely tied to the wall.

While the rafts are secured to the shore, the Filipina is doing her washing.



BOATS LADEN WITH COUNTRY PRODUCE.

Market-day is at hand !

Here come the boats from the country, laden with fruits. One of them is piled high with coconuts.

Under the queer little bamboo awnings are the women

and children, very likely. In the markets nearly all sorts of fruit are for sale. Perhaps there are apples which have come from Hong-Kong. Pineapples, coconuts, mangoes and bananas are almost given away, but apples cost ten cents apiece.

Tuba, the sap of the coconut palm, is being sold everywhere as a refreshing drink.

Perhaps there will be found locusts for sale. The people will fairly scramble to see who can buy the most of them. They call them a dainty dish.

When he goes home, the Filipino will probably carry a fresh roll of bush-rope with him. He buys this to use wherever we would use twine.

Perhaps his wife has bought a wreath of flowers.

Did you ever smell the perfume called ilang-ilang?

How sweet it is! The ilang-ilang tree grows nowhere else but on the Philippine Islands, it is said.

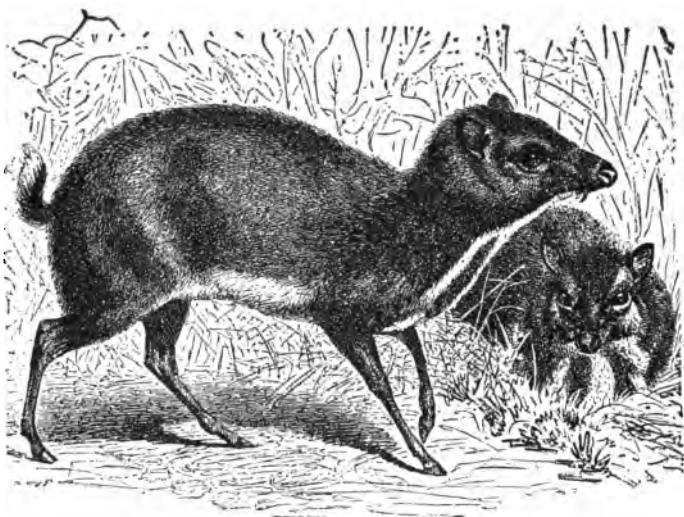
One sees the stalks of sugar-cane after they have been pressed in the mill until the juice is nearly all out of them.

After they have lain in the sun a few days, they will be quite dry. Then they will be used for fuel.

One sees the sugar itself in neat little patches, also drying in the sun. There is room to walk between them, and the little grains will be turned over to make them dry more quickly.

Sugar-cane grows on all of the islands in the Southern Pacific Ocean.

Are not these curious little animals? They are found in the forests and uncultivated lands west of Manila.



MOUSE-DEER OF THE PHILIPPINES.

The tiny creature, less than a foot high, is very intelligent.

When caught in a snare it pretends to be dead, but, the moment it is free, it leaps up and darts away to the nearest thicket before the hunter has had time to wink.

The forests abound in monkeys. They are so common that no one notices them, except an occasional white one, which is always a curiosity.

How bright the birds are that **flash** through the branches! There are many parrakeets and cockatoos among them.

Near the seashore are the dark-colored little swifts that build nests which the Chinese consider very nice to eat.

The swift finds a fungus growth on the coral reefs. He **works** this over with his short, strong bill.

He attaches it to the side of a cliff, where it soon dries and makes a firm little nest.

The fresh nests of the early season are so much prized that they bring a large price in the market.

They are usually made into soups.

Should you like a bird's-nest soup, do you think?

Instead of a bird's-nest soup, you would probably prefer a dish of mangoes.



A BUNCH OF MANGOES.

If the fruit is picked when it is ripe, it is good to eat just as it comes from the tree.

If it is picked while it is green, it is preserved or pickled.

A tart of mango preserves is very nice.

The mango is about the size of a big plum or a small apple.

How beautiful the tree is, with its glossy leaves and wide-spreading branches!

With your mango tart, perhaps you would like a bread-fruit which has been baked in hot ashes.



A MANGO-TREE.

You may scoop out the inside. You will find that it tastes a little like potato warmed in milk.

It is certainly convenient to have one's bread growing on a tree near one's door!

What would the Filipinos do without the coconut tree?

They eat the kernel of the nut and drink the liquid inside. Then there is the drink called tuba, made from the sap.

From the husks, ropes and cords are made, and spoons and cups and various articles are carved out of the shells.

The dried leaves are used to thatch the houses.



A NEGrito MOTHER.

The veins and small ribs of the leaves are made into brooms.

Barrels, casks and pipes are fashioned from hollow trunks of the trees.

The oil is used in many ways—in lamps, for hairdressing and for cooking.

It seems as if the cocoanut furnishes almost everything that the Filipino needs.

When white men first went to the Philippines they found many people already living there.

Most of them belonged to the brown race, but one tribe was black.

These black men, who were the earliest inhabitants of the Philippine Islands, are called Negritos

or little negroes.

They are among the smallest people in the world.

They hunt and fight with bows and arrows, and are very active.

They did not build villages nor even huts, but for a long time wandered over their islands undisturbed.

At length brown people came and drove them to the mountains or into the jungles.

The picture shows you a Negrito mother carrying her baby and a pet monkey.

Both men and women have a curious custom of filing their front teeth.

This man is very proud of his sharp, pointed teeth, but unfortunately many of his tribe have dark-colored teeth, which are made so by plants that they chew.

With their small bodies, woolly heads, large feet and dark, filed teeth, the Negritos are a queer looking people.

About thirty thousand of them live in the Philippines to-day.

On the next page is a Manila schoolboy. Does he not look neat and cool in his white clothing? It costs very little to have such suits made, but they soon wear out.

The native way of washing is to rub soap on the clothes and then beat them upon flat stones. This is hard upon light clothes and sometimes a new coat returns from the wash in rags.

The native schools were held in the homes of the teachers. The scholars sat or lay on the bamboo floor and shouted

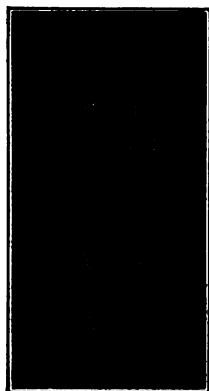


A NEGrito.

their lessons aloud. The teacher heard them recite while she prepared dinner and did her other housework. In these schools the children studied only a primer and a catechism.

When the Americans first went to the Philippines they saw that the people must be educated ; so schools were immediately opened. Among the soldiers were many who had taught at home and these were chosen as teachers.

They often found the Filipino school-boy very interesting, with his bright eyes and expression of cheerfulness. They saw that he was quick and attentive. He soon drew and wrote well, and he learned to speak English very quickly.



A MANILA SCHOOLBOY.

Now there are public schools all over the islands. The children are studying many of the same subjects as are our American children.

Night schools are provided for the older people, who work during the daytime.

Good teachers from the United States teach not only the children but also the native teachers.

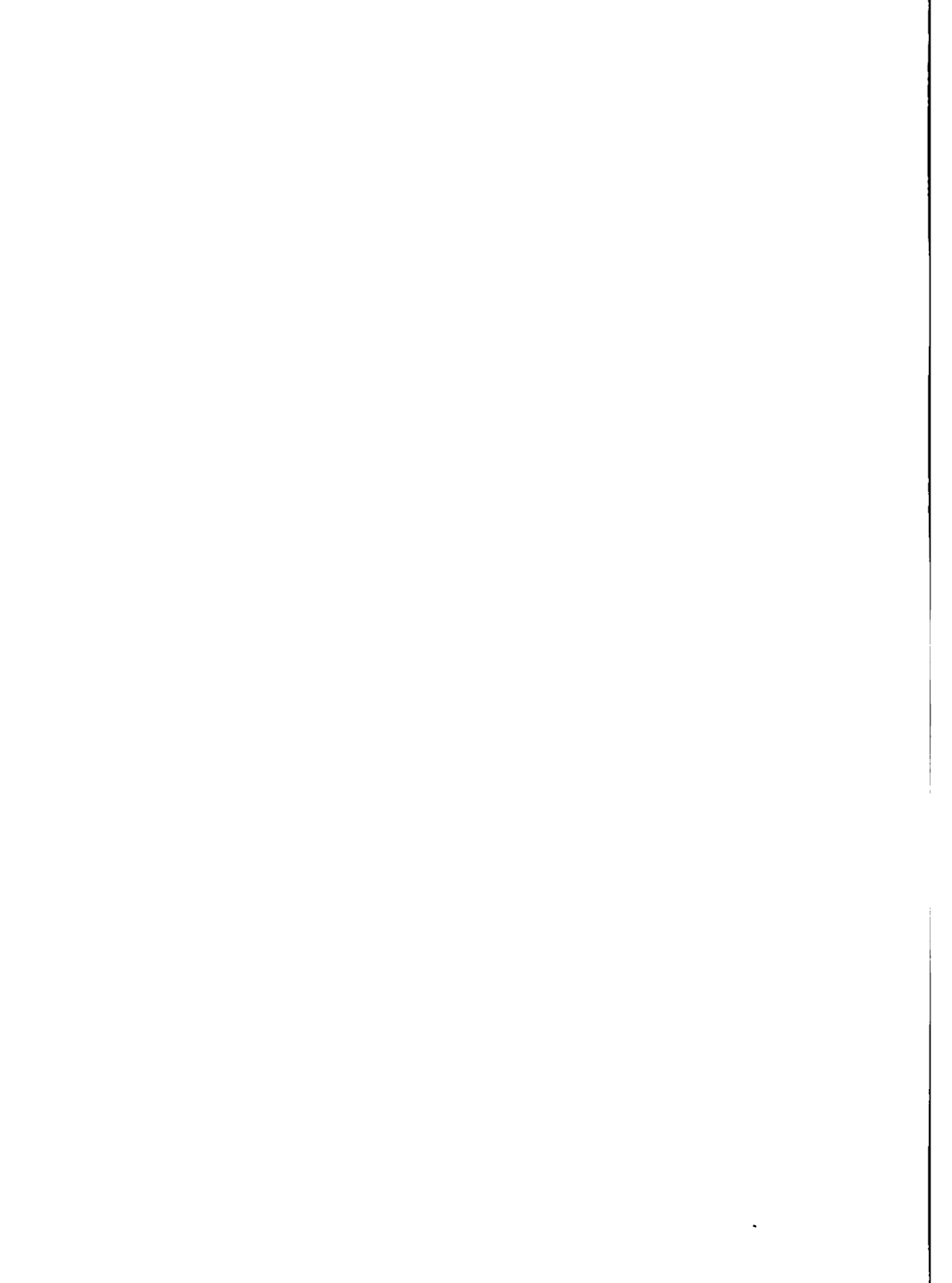
PRONOUNCING VOCABULARY.

KEY : âle, ât, câre, ârm, all ; êve, ênd, hêr ; Ice, ill ; ôld, fôr, òn ; ûse, ûp, fûr ; fôôd ; ch as in chop ; g as in go.

Adirondack	ăd-ĭ-rŏn'dak	Duluth	dū-looth'
Arizona	ăr-i-zŏ'na	Dyea	dī-yā
assay	ăs-săy'	dynamite	dī'nā-mīte
avenue	ăv'ē-nū	El Moro	ăl-mŏ-rŏ
Ballarat	băl'lā-răt	enamel	ên-ăm'ěl
Bangor	băn'gôr	Erie	ē'ĭ
buoyant	bwŏŏ'yănt	Fort Sewell	fŏrt-sŏŏ'ěl
canoe	kā-nŏŏ'	Franconia	fran-cŏ'nĭa
cañon	kăn'yŏn	freight	frâte
chandelier	shăn-dă-leer'	geyser	gĭ'sér
Chattanooga	chăt-ă-nŏŏ'ga	Gloucester	glŏst'ér
Chesapeake	chês-ă-pĕĕk'	gluten	glŭ'tĕn
Cheyenne	shĭ-ĕn'	Havre de Grace	hă-vér dŭ grăs
Chilkoot	chĭl'kŏŏt	Hawaii	hă-wĭ'ĭ
Cienfuegos	sĕ-ĕn-fwă'gŏs	Herreshoff	hĕ're-shŏf
Concord	kŏnk'urd	Huron	hŭ'rŏn
cyanide	sĭ'ăn-ĭd	hydraulic	hĭ-draw'ĭlk
Del Monte	dĕl mŏntă'	lichen	lĭ'kĕn

Los Angeles	lös än'jél-èz	profile	prō'fil or -fəl
Manan	mā-nān'	pueblo	pwéb-lō
Mariposa	mār-ī-pō'sā	Rangeley	rāng'lī
Massachusetts	mās-sā-chū'sèts	rifle	rīf'l
Matanzas	mā-tān'zās	Roebling	réb'ling
Michigan	mīsh'ī-gān	Roosevelt	rōōs'vēlt
Missouri	mīs-ōō'-rī	San Francisco	san fran-sīs'ko
Moki	mō'kī	San Juan	san-wān'
Monterey	mōn-tē-rā'	sapphire	sāf'fir
Negritos	ne-grē'-tōz	Sault Ste. Marie	sōō-sāu-mā-rēē
Niagara	nī-āg'ā-ra	Seattle	sē'āt-l
nitro-glycerine	nī-trō-glīs'ēr-in	Sierra Madre	sē-ēr'a mā'drā
Ontario	ōn-tā'rī-o	sluice	slūs
palisade	pāl-ī-sād'	Spes Utie	spā-ōōtē
Pasadena	pās-a-dē'na	spermaceti	spérm-ā-sē'tī
Passamaquoddy	pās-a-ma-kwōd'ī	sphinx	sfīnks
patio	pāt'i-o	Superior	sū-pē'rī-or
Pennsylvania	pēn-sīl-vā'nī-a	St. Augustine	sānt a'gūs-tēr
Penobscot	pē-nōb'scot	trophies	trō'fīz
Philadelphia	fil-a-dēl'fī-a	trough	trawf
phosphorus	fōs'fō-rus	turbine	tur'bīn
picturesque	pīct-your-ēsk'	Wawona	wā-wō'na
Placid	plā'sīd	Wisconsin	wīs-kon-sīn
plateau	plā-tō'	Wyoming	wī-ō'mīng
porpoise	pōr'pūs	Yosemite	yō-sēm'-ī-tē
Porto Rico	pōrt'o rēē'kō	Yumuri	yōō-mōō'rī





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